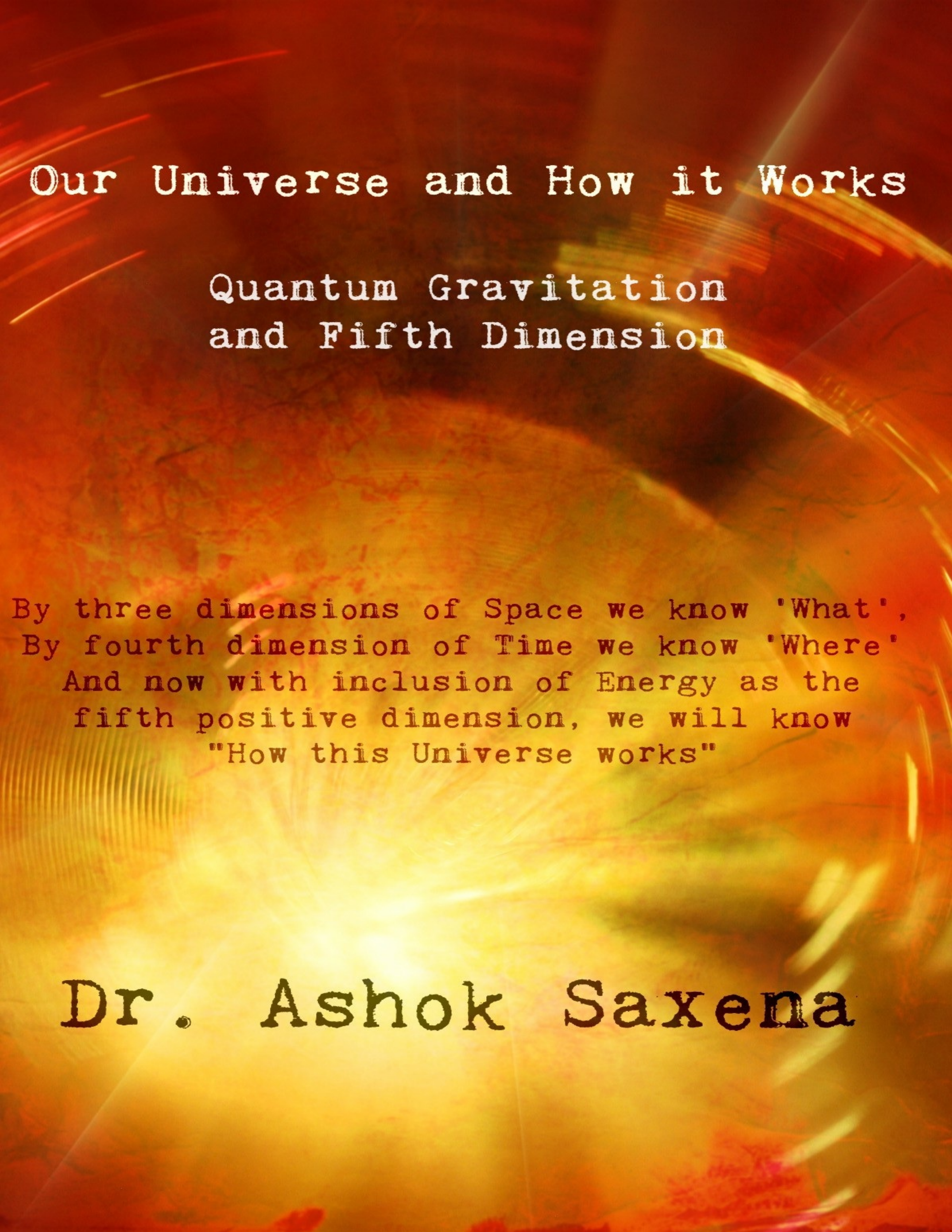

Our Universe and How it Works

Quantum Gravitation
and Fifth Dimension

By three dimensions of Space we know 'What',
By fourth dimension of Time we know 'Where'
And now with inclusion of Energy as the
fifth positive dimension, we will know
"How this Universe works"

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MANAS PRAKASHAN

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Thanks to my wife Prof. Dr. Surekha Saxena for helping me to pursue the research and write this script. I am thankful to my sons Ashwarya and Amit for their valuable contributions in shaping this book. Amit took significant time-off his schedule to help edit the contents and make it more interesting for the uninitiated.

Dr. RC Saksena, who has been a senior scientist at National Physical Laboratories at New Delhi, has provided suggestions which helped to take my work to the right forums.

Mr. Ajay painstakingly created and edited the diagrams, graphs and charts for this book based on my descriptions and sketches.

My friends and colleagues have patiently heard my ideas and provided immense support in their own unique way during all stages of this work.

My publishing company has provided timely technical support and ease of distribution.

I would like to pay my highest regards to the Almighty as He gave me the opportunity, passion and direction to complete this script.

Note about formatting

Normal font has been used for all newly advocated concepts along with their explanations and proofs.

Bold font is used for emphasis and headings wherever necessary.

‘Key phrases’ which are new or uncommon are placed in inverted commas.

Italics is used to distinguish already known and established concepts from the new concepts introduced in this Treo model.

Linear notation is used for mathematical formula, where symbol circumflex ^ or $^{\text{superscript}}$ is used for raising to a power, symbol √ is used to indicate square-root, symbol slash / is used for indicating division, symbol . or × or simply no symbol is used for simple multiplication (no distinction between scalar and vector multiplication is required for understanding the text), the symbols – or - represents subtraction, and lastly + has been used to represent addition.

FROM THE AUTHOR’S DESK

This section provides an insight into the author’s approach, which involves logical deductions based on scientific observations, relying on simpler explanations where possible with an objective to come up with a comprehensive model to resolve perplexing paradoxes and divergence between known theories that describe our universe

> *"I think, therefore I am." - René Descartes*

It is the eternal quest of human beings, to know the answer, to the basic questions - ‘Who am I’ and ‘Where am I’? Just after our birth as soon as we open our eyes, we start observing our surroundings to understand the answers. We spend our whole lives struggling to fulfill our basic demands of food, clothing and shelter and often the quest for these fundamental questions remains unfulfilled.

This book is an attempt to present **a new model of the universe** which might help to shed some light on the unsolved mysteries such that they may be understood with a basic understanding of physics. Several commonly observed phenomenon are explained using this new model, named the **Treo Model**, which attempts to describe the universe with a ‘**single building block**’ and a ‘**single mechanism for creation of all forces**’, which can be considered a strong model based on Occam’s razor[1].

The approach of this book is based on **model dependent realism**. The proposed model is a mathematically consistent model based on observations, inferences and earlier works by scientists and philosophers about our universe and at the same time it is consistent with known scientific facts. It does not contradict the established principles, but only explains them based on a new model. For ease of understanding, I have tried to keep it simple and explained it at places with the help of diagrams and elementary calculations. Many of the observations which support this treo model have been already described earlier in my previous book, INSIDE A WAVE (2005, Manas Prakashan).

We will try to dig deeper into some fundamentals of the universe and raise difficult questions such as - Why are laws of physics always followed in nature? Are the four basic forces related? We know from Newton's laws that every action has an equal and opposite reaction, but what reacts and how? If a body is moving, it will go on moving unless a retarding force is applied, but how and why every mass is continuously moving in this universe? Why is the speed of light-wave constant in free space and how does it travel in vacuum apparently without any medium for waving? How can light photon behave both as a particle and a wave? What is the fate of our universe? It is often the case that the scientists proceed by describing 'what' occurs, but exactly 'how' it happens and 'why' it is so is left for later.

Although many of these observations appear to be unquestionable, universal truths or facts the way they are, we will try to discover the 'why' and 'how' behind them and many other such mysteries and connect these apparently unrelated phenomenon with a single model. To accomplish this goal we will investigate the structure and functioning of our universe starting from the proposed building blocks, which are explained in more detail with objective proofs and interesting insights as we move ahead. The proposed new model is supported by simple geometry, mathematics and many observations. To introduce such a model of the universe has been an elusive pipe dream of theoretical physicists for decades, so I will consider myself successful even if it is a step in the right direction which manages to raise critical thinking and awareness about our understanding of the cosmos. It is my hope that it persuades interested physicists to spare some thought and research in the direction of the proposed model - to provide wider acceptance and more credibility to it or to discover better, more refined unified models of the universe.

As the model consists of some speculative elements and it attempts to relate the known concepts about the universe with a new framework, the author welcomes any inputs and feedback by email or on his website. This work is certainly in its evolving stage and further refinements and further editions of this book can be expected soon based on opinions of experts in the field. The immediate objective is to present the model, set the reader thinking in a new direction and open the stage for discussions.

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1. *Occam's razor is a problem-solving principle devised by William of Occam (c. 1287–1347). It states that among competing hypotheses, the one with the fewest assumptions should be selected. Other, more complicated solutions may ultimately prove correct, but—in the absence of certainty—the fewer assumptions that are made, the better.*

Robert Grosseteste, describes this principles in Commentary on [Aristotle's] the Posterior Analytic Books (Commentarious in Posteriorum Analyticorum Libros) (c. 1217–1220). declares: "That is better and more valuable which requires fewer, other circumstances being equal. For if one thing were demonstrated from many and another thing from fewer equally known premises, clearly that is better which is from fewer because it makes us know quickly, just as a universal demonstration is better than particular because it produces knowledge from fewer premises. Similarly in natural science, in moral science, and in metaphysics the best is that which needs no premises and the better that which needs the fewer, other circumstances being equal."

PREFACE

This section briefly describes what to expect from this book, why a simple non-conventional model might help in better describing universal phenomenon and how this new model might solve the riddle of unification of forces

> *"Force is an influence, which causes an object to undergo certain change, either concerning its movement, direction, or geometrical construction. All forces which exist in the universe are solo or combined manifestations of four basic forces."*

I remember a story of an unpopular King and a cunning tailor heard from my maternal grand mother in my childhood - it goes as follows:

> *One day a tailor came to the King and announced in the royal court that he can prepare a dress which can be seen only by wise persons; crooked persons and fools will not be able to see it. Intrigued, the King ordered it for himself. After some time, the tailor prepared a very costly attire for the King and dressed the King meticulously. The King came to the court and everybody praised the dress. To his dismay the King could not see any dress on himself but he remained silent to prove himself a wise man. All the courtiers suggested that the general public should also see this beautiful dress. The public was informed about the dress and a procession was organized for the next day. The tailor dressed the King again and as the procession of the King sitting on an elephant back moved through the city, the people on the streets praised the King and his dress with a loud applause. The King was delighted. But after some time a little boy in the crowd shouted. 'Oh! Look the King is naked'. - An adaptation of the*

> *fairy tale - The Emperor's new clothes*

When it comes to gravitation we have closed our eyes for 350 years and ignored some clear-cut observations, as in the above story. Fascinated by a few equations, we have labeled gravitational attraction as a distinct force in itself, while it is only one of the effect of the complete gravitational phenomenon. I suppose I am the unwise boy shouting; that ‘gravitation’ serves to support the bodies from all around by an ‘aura of kinetic energy’ generated by surrounding space-matrix, and ‘gravitational attraction’ is simply its effect observed due to deficient support provided by common and shared space-matrix in between the bodies.

Despite Herculean efforts made in the last 35 years of his life, Einstein was unable to put the electromagnetic forces and the gravitational forces in the same frame and couldn’t achieve his target of unification of forces, probably because he did not consider the purpose and varied effects of deformation of space.

Implications of the Treo Model

We will discuss later in more detail in this book, there are many far reaching implications of this newly hypothesized model, referred to as the **Treo model** or **Treo theory** henceforth.

Our universe is made up of one object, energy particles of primordial soup first time named as ‘treos’, and one tool of creation, that is ‘load dependent deformation of space-matrix’.

Rate of vibration of the space-matrix, named as the ‘cosmic rhythm’, decides the value of all universal constants and thus regulates the whole universe.

Our universe is a Quantum universe. There is a fixed least size of fundamental energy particle. All space and matter is formed of integral multiples of this hypothesized particle (treo) with a definite least size and energy. All photons are made up with mass-energy which is in integral number of quanta and all matter is composed of integral number of 'unit electrons and it's localization energy'

There is a fixed least time in the universe, which is the time period after which this treo particle executes one vibration when forming space. Thus we have a universe which is made up of discrete blocks and which performs any process after a minimal interval. One quantum mass-energy deforms one layer of unit space-matrix. As less than one layer can not be deformed, all mass-energy and its supporting kinetic energy leaps only in discrete units of one quanta (and not continuously) which increasingly deforms space layer by layer.

All forces are a reaction to load by space-matrix. As we will see in this book, there is actually only one force in nature, which is action (or 'load') based reaction (or contraction) of space-matrix. It manifests itself differently by involving increasing number of dimensions with increasing load, thus appearing as four different basic forces (Electro-magnetic, Weak, Atomic and Gravitational force).

Energy is the fifth dimension of the universe. In addition to three dimensions of length, breadth & depth and fourth dimension of time. By examining the universe in five dimensions it unfolds very clearly and many poorly understood or unexplained phenomenon about our universe can be explained clearly. Thus the treo model can also be called the theory of everything.

Our universe is a pendulum universe with a definite lifespan. Our universe is a three or four dimensional pendulum of contracting and expanding ball which swings from its contracted phase with maximum kinetic energy state at its birth by big bang, to its fully expanded state with maximum potential energy just before its death by big crunch. Our universe was born, ages and dies to reborn again.

Universal constants can be redefined in terms of Planck natural units.This model describes Quantum gravitation as it unites general theory of relativity with quantum mechanics. Constants such as Planck constant, Reduced Planck constant and Fine structure constant define and determine certain properties of space-matrix. Planck constant is the angular momentum of one quanta energy which calibrates layer by layer deformation of unit space-matrix, while Reduced Planck constant is the value of one quanta mass-energy. Fine structure constant equates to the amount of localization energy required to join unit electrons (having same charge).

Known facts described by the treo model

Why all force fields fade in inverse proportion to square of distance from the source can be explained by **coloumn geometry** of space-matrix as described in the treo model.

Why time slows down in a gravitational field, is explained by reduced rate of vibration of bound treos in local space-matrix.

Why speed of light in free space is fixed, is described by displacement by one bound treo distance per vibration of space-matrix.

Why does atomic structure of all elements follow a pattern of s, p, d, f atomic orbitals, is explained by coloumn geometry of space-matrix.

Why are baby bodies in any gravitational field placed at specific quantum levels, and what decides their speed of rotation and revolution? This will be covered under the section of Planets. Other peculiar observations in the solar system such as rings of Saturn and the formation of Asteroid belts will also be explained in a similar way.

Why photons are not mass less and why all elementary particles are not point masses but they spread on a fixed (wave) length on space-matrix?

The new **Treo theory** related to the above points and many other observations will be covered in the subsequent chapters. **The proposed model has been used to explain the Structure of Universe, Quantum Gravitation and the Unification of Forces.**

▣▣

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BUILDING BLOCKS

This chapter will provide an overview about the key concepts of the new Treo model in a summarized form, and it can serve as a ready reference while reading further chapters which have more details "We have begun to contemplate our origins",

Following are the proposed elements of the new Treo model :

- **Treos are the building blocks of Universe :** Universe is made up of only one type of particle which constituted the primordial soup, (first time) named as 'treo'. All treos are identical and have only one dimension of length, equal to Planck least length. Treos exist in two forms, 'free treos' which form all elementary particles and 'bound treos' interwoven with 'voids' which form the space-matrix.[Details]
- **Bound Treos form Space-matrix and all bosons :**
- Bound treos are interwoven alternately with curled up voids to construct the space-matrix. The void is the true emptiness between two bound treos of the space-matrix. In this treo model it will be shown that the only tool of creation is the 'load dependent deformation of space-matrix'.
- Five positive dimensions are represented by 'bound treos', which incorporate three dimensions of Space, fourth dimension of Time and the newly introduced fifth dimension of Energy. The additional five negative dimensions of the universe are formed by the continuously uncurling 'partially curled up voids'. Thus ten dimensional, omnipresent, uniform space-matrix is formed, which shapes our universe. The space-matrix has interdependent components of Space-Time-Energy.
- The bound treos of space-matrix continuously vibrate at Planck

frequency or S times per second in all S directions when no load of free treos is being applied on the matrix.

- The 360 degrees of a circle are divided into S number of directions in this model.
- Bound treo forms all bosons (Photons, Gluons, W & Z bosons and Graviton)
- **Free Treos form Matter which exert different loads :** Matter is considered to be made of energy particles or free treos, hence also referred as mass-energy. Free treos form all elementary particles such as nucleons and fermions, which spreads it's mass-energy on its wave length in one line on all bound treos. The number of free treos (according to packet density) on (any) **one** bound treo in wave length serves as 'load'. The total number of free treos present in some basic mass-energy packets is calculated by dividing the known mass of the elementary particle by Planck least mass that is unit mass or the mass of S^2 free treos.

Here, equals to sign implies 'is composed of'

Unit photon packet = $1.855394405 \times 10^{43}$ free treos

Gamma photon of 1.02 eV = $2.872470400 \times 10^{64}$ free treos

Electron of 0.51 eV = $1.439491604 \times 10^{64}$ free treos

Proton = $2.645363273 \times 10^{67}$ free treos

Neutron = $2.641704371 \times 10^{67}$ free treos

Planck mass or Unit mass = 2.17×10^{-8} kg = $3.442488398 \times 10^{86}$ free treos In this book, Planck mass is found to be same as the mass of S^2 free treos, also mentioned henceforth as **one unit mass**. [Details]

- **Time can be defined by frequency of vibration of Space-**

matrix : The continuous universal expansion and local deformation of the space-matrix after each vibration, causes an on going continuous change in the entire universe; which is perceived as ‘flow of time’. This continuous change which occurs after each vibration in Planck least time, occurs S times per second. This is rate of change and the minimum processing time of any reaction in the universe. If there is no change, every thing will stop, and the universe will appear like a photograph. In other words there will be no dimension of Time. The time can slow down locally because of the reduced rate of vibrations of bound treos forming space-matrix. [Details]

- **Photon packet is pushed over one bound treo distance per vibration by Space-matrix :** We can deduce that light (photon packet) travels one bound treo length per vibration of space-matrix in free space. As mentioned earlier, there are S vibrations of space-matrix per second. Hence the distance covered by light in one second is S number of bound treos.

S times Planck least length

$= (1.855394405 \times 10^{43}) \times (1.615788303 \times 10^{-35})$

$= 2.997924577 \times 10^{8}$ meter per second

It is the known speed of light in free space. [Details]

- **Energy changes it’s form along with mode of vibrations of Treo :** All ‘bound treos’ in undeformed space which were initially vibrating in all S planes per second (to form three dimensions of space) start vibrating only in one plane in the direction of the load to support it, thus contracting the space-matrix. It is postulated in this model that vibration in all directions indicate a state of high potential energy of bound treo, while its vibration in the direction of the load is a state of high kinetic energy. When any load of free treos is applied, an equal number of bound treos of space-matrix are thus converted into so called **kinetons** or particles of kinetic energy, which all get arranged according to the coloumn geometry to oscillate in the direction of load. This is how for every load the space-matrix contracts and produces an equal and opposite reaction, in accordance with Newton's third law.[Details]

- **One quanta mass-energy** is defined as the mass-energy of S free treos.
- **Reduced Planck constant represents value of one quanta mass-energy :** It can be seen that the value of reduced Planck constant is same as one quanta mass-energy. Angular momentum of this one quanta energy is Planck constant. A cube of S number of bound treos is one unit space-matrix. The load dependent angular deformation of space-matrix is calibrated by Planck constant, which decides the wave pattern (EM Waves, Matter waves and gravitational waves) in increasing number of dimensions of one unit space-matrix. [Details]
- **Deformation of Space-matrix : Unit space-matrix** contracts or deforms layer-by-layer in response to increasing load in increasing number of dimensions of Space-Time i.e. in length, depth, breadth and time, to support upto S free treo load by S deformed bound treos (called kinetons) in first dimension, upto S^2 free treo load is supported by S^2 kinetons in the second dimension, and similarly upto S^3 and S^4 free treo load can be supported at one point (at gravitational center) by the space-matrix by contraction in third and fourth dimensions. [Details]
- **Coloumn geometry :** The deformation of unit space-matrix increases at each quantum level upto $\sqrt{S}$ quantum levels, to finally form one $\sqrt{S}$ layered rotating 'coloumn' in each dimension according to the proposed coloumn geometry. In a coloumn thus defined in this model, 2n–1 'coloumn components' are there in each n^{th} layer and total n^2 components are there in each complete coloumn. The same pattern is followed in all four dimensions but the component forming the coloumn is different in each dimension. In the first dimension

this coloumn component is ‘kineton’, in second dimension this component is ‘orbitum’, in third dimension the component is ‘graviton’ and in fourth dimension the component forming the coloumn is ‘electron black hole’. [Details]

- **Deformation in length of unit space matrix i.e. deformation in first dimension - EM spectrum :** In the deformation of **first dimension of length, one quanta mass-energy increases** at each of √S quantum levels to form all type of photon packets. Thus all type of photon packets of electro-magnetic spectrum have integral multiples of one quanta mass-energy, with minimum one quanta mass-energy in a unit photon and a maximum of √S quanta in gamma photon packet. The photon packet spreads uniformly in one line on all bound treos in its one complete wavelength. The exerted ‘load’ on each bound treo along this wavelength is supported by one rotating kinetic coloumn containing equal number of kinetons. While the wavelength decreases from S bound treo length for unit photon to √S bound treo length for gamma photon, the number of layers increases from one to √S layers and kinetons in square number from one to S in each kinetic coloumn. Frequency of photon wave also increases from one to √S per second which is numerically same as the number of layers of kinetons in each of these first dimensional kinetic coloumns, also called ‘sub kinetic coloumn’. In first dimension each one quanta energy in photon packet is supported one by one by EM waves which form in one second. [Table]
- **Transition from Gamma photon to Electron occurs at the limit of first dimensional deformation :** In case of EM waves, total S layers in all rotating sub kinetic coloumns together form one crest and one trough for each one quanta mass-energy of the photon packet. After the maximum load limit of one quanta mass-energy (S free treos) at each bound treo in wavelength of gamma photon in first dimensional deformation in length, the wave pattern changes from EM waves to matter waves in second dimension of depth. Now each sub kinetic coloumn made up of maximum S bound treos, supports one quanta

mass-energy or S free treos and with maximum √S units of angular momentum (at 90°) start rotating at its one bound treo to form a wave let. The half mass-energy in packet of gamma photon on half wave length forming crest start rotating clockwise to form ‘positron’, while the half packet on other half wave length forming trough start rotating anti clockwise to form ‘one unit electron’.

- Thus unit electron packet and all elementary particles are not point masses, rather they spread their mass-energy uniformly over their entire (half) wavelength. In unit electron packet and in all elementary particle packets, one individual kinetic coloumn of S kinetons (supported by S layers of unit space-matrix) forms one **orbitum**, which supports the load of one quanta mass-energy for one second by its one rotation in S vibrations. All identical energy orbitums in entire wavelength of an unit electron or in any lepton packet which are placed one over other joins to form one orbit.
- **Deformation involves length and depth i.e. deformation in second dimension - Elementary particles : Increasing mass energy of ‘one unit electron’** at each of √S quantum levels is supported by deformation in second dimension of depth, while the load increases (by square of quantum number) from one quanta to S quanta on each bound treo due to its further reducing wavelengths. To support each one quanta additional load, one additional orbitum is formed. Now with increased multiple quanta mass-energy (and with increasing frequency which is more then its wave length at each quantum level in second dimension) each one quanta load in elementary particle packet is now supported for one second by one rotating orbitum and thus this multiple quanta load is supported simultaneously at the same time by multiple rotating orbitums per second. S quanta mass-energy of one unit mass is the maximum load which can be supported at one bound treo of space-matrix, which now converts into one graviton. The kinetic energy supporting S quanta mass-energy of a unit mass on one

graviton (unit gravitational center) comes from S^2 kinetons in S orbitums, which are arranged according to the coloumn geometry in one ‘full kinetic or unit gravitational coloumn’. [Details]

- **All elementary particles are formed by integral multiple of unit electrons :** Composite mass of all elementary particles are produced by union of integral number of ‘unit electrons’ with their rest mass and localization energy. The composite mass of unit electron is calculated by division of mass-energy of unit electron of 0.51 MeV with double of fine structure constant [1] i.e. 0.51 / (2 × 1/137) which equals 35.01 MeV.
- **All known elementary particles have mass energies which are integral multiple of this value 35.01 MeV.** This confirms that all matter is formed by integral number of electrons bounded by its localization energy, like cementing material (Gluons) uniting bricks (unit electrons) in wall.[Details]
- **Deformation involves all three dimensions of space i.e. deformation in third dimension- electron black hole: Increasing ‘one unit mass’** at each of √S quantum level is supported by deformation in **third dimension** of breadth. With 2n–1 gravitons in each n^{th} layer (concentric circle) , one √S layered ‘unit electron black hole’ of S gravitons is formed by complete deformation of one unit space-matrix.[Details]
- **Deformation in fourth dimension - Gravitational spheres : Further increasing mass-energy of ‘√S unit masses’** at each of √S quantum levels is supported by deformation of square number (√S layered) S ‘electron black holes’ arranged according to coloumn geometry in kinetic coloumn of fourth dimension, and thus form maximum S layers in gravitational sphere in deformation of **fourth dimension** of space-time. On calculation one layer of gravitational sphere increases per unit mass to support the mass-energy of any cosmic body. The gravitational sphere of 0.1 cm or 10^{32} bound treo layers forms for Earth a body made up of 10^{32} unit masses and of 3 km diameter with 10^{38} bound treo layers for Sun a body having

10^{38} unit masses.[Details]

- **Gravitation as reaction of Space-matrix to support the bodies :** Gravitation can be described as a reaction by the space-matrix to neutralize the mass pressure of a body and thus support it. From one quantum to S quanta free treo mass-energy is supported by formation of sub-kinetic coloumns and shells on decreasing wavelengths in first and second dimensional deformation of unit space-matrix. One unit mass is the maximum load which can be supported at 'one bound treo' (at one point by one graviton) by S^2 kinetic energy in one 'full kinetic / unit gravitational coloumn'. Square number of gravitons support the mass-energy of 'multiple unit mass bodies' in the deformation of third and fourth dimension respectively from increasing number of planes and from increasing number of directions.[Details]
- **Gravitational attraction as loss of support by Space-matrix due to presence of another body : When a body comes within the gravitational field of another body, then due to decreased gravitational support to both bodies in the region of shared common space-matrix between them, they fall towards each other; which is referred to as the conventional gravitational attraction.**[Details]
- **Position of baby bodies in gravitational field :** Planets (and all baby bodies) are placed primarily at 10^{4th} and also at 10^{5th} quantum level in gravitational field of the Sun (or in the gravitational field of any parent cosmic body). [Details]
- In a gravitational field, the distance i.e. the **number of bound treo layers upto any quantum level (e.g. planetary orbit),** can be calculated as the **layers in gravitational sphere of cosmic body multiplied by square of this quantum number.** [Details]
- If **E is the gravitational kinetic energy of Sun at 10^{4th} quantum level** in the orbit of planet Mercury [= v2 = MG/r where r is distance of planet Mercury from Sun, M mass of sun and G is gravitational constant], it fades to E/2 in orbit of

Venus and E/3 in orbit of Earth (in two sub shells) at the first planetary quantum level. This kinetic energy of Sun at the level of orbit of Mars is $E/2^2$ at second planetary quantum level; in Asteroid belts it is $E/3^2$, in Jupiter's orbit it is $E/4^2$, in Saturn's orbit $E/5^2$, at Uranus's orbit $E/7^2$, at Neptune's orbit $E/9^2$, and at Pluto's orbit it is at $E/10^2$ energy level at tenth planetary quantum level. [Table]

- **Biggest** planet of solar system broke down to form asteroid belt. Biggest satellites of all outer planets i.e. of Jupiter, Saturn, Uranus, and Neptune are at $E/3^2$ gravitational kinetic energy level and thus it is inferred that biggest planet of solar system was at $E/3^2$,which broke down and now we find asteroid belt at this level. [Details]
- Presence of a heavy satellite (e.g. in gravitational field of all four outer planets) tilts distal part of parent gravitational (field) coloumn. As after the presence of a heavy satellite, the orbit of distal satellites of outer planets get more inclined.
- Satellites of all outer planets are placed in a similar pattern as that of electrons in the atomic structure.
- **Principle of equivalence :** Equal number of bound treos deform and get converted into kinetons to support the free treos in a body decide its **gravitational mass**; while pinning down the body the same bound treos impart it equal **inertial mass**. Thus the gravitational and inertial mass of a body is always equal in accordance with the principle of equivalence.[Details]
- **Unification of forces : All forces are generated by 'action-reaction mechanism of space-matrix' in increasing number of dimensions**. It manifests as electro-weak force by formation of sub kinetic coloumns in first dimension and with their extension in second dimension and by formation of orbitums they produce atomic forces. While gravitational fields are produced by the deformation of space-matrix in third and gravitational spheres are formed by deformation in fourth dimension. [Details]
- **Quantum Pendulum Universe :** As we will see in this book,

our universe is a quantum universe, where S bound treos are in one line of unit space matrix and each such line supports one free treo for one second. S such lines (in one EM wave or in one orbitum) supports one quanta mass-energy, and S^2 such lines in one full sheet support S quanta mass-energy of unit mass. One unit space-matrix completely deforms to support S^3 free treos contained in one 'electron black hole'. S number of such electron black holes are present in one 'unit black hole', which support S^2 unit masses load at gravitational center of S unit masses.[Details]

- **Quantum gravitation :** Gravitational fields of 'multiple unit mass cosmic bodies' are formed by union of multiple 'full kinetic / unit gravitational coloumns' each supporting the 'load' of one unit mass, so the quantum physics can be related to 'general theory of relativity'. **The basis of quantum gravitation is one free treo is supported on one bound treo which perform S vibrations per second.**[Details]
- **Expansion of the Universe :** Simultaneous uncurling of all curled up voids in space-matrix is responsible for the accelerating expansion of universe. The space occupied by each void is always increasing due to simultaneous uncurling of it's curled up five negative dimensions. Thus the periphery of our unit universe is expanding by Planck least length with each vibration of space-matrix; or in other words at the speed of light. [Details]
- **Probable fate of the Universe :** The total kinetic energy of our universe is continuously decreasing while its total potential energy is constantly increasing (increasing entropy) due to on going expansion, by slow and simultaneous uncurling of all curled up voids of space-matrix with its each vibration. After one lifespan of S^2 vibrations, which will result in full expansion of the universe, taking it to its maximum potential energy state, and now the magnitude of five negative dimensions of voids will equal five positive dimensions of bound treos, causing all bound treos and adjacent voids to annihilate each other. This

will disintegrate the fabric of space-matrix instantly leading to the 'Big crunch' and an unstable ten dimensional universe. This Big Crunch will be immediately followed by the Big Bang leading to a new baby universe with again completely curled up voids. The new baby universe thus born at its maximum kinetic energy state, will expand slowly by uncurling of all its voids, to live its next lifespan of S^2 vibrations. [Details]

- **S number dictates the Design of our unit Universe (**one bran out of 26 brans of multivera**) -**

S number dictates the Design of our Unit Universe [2]

S number = 1 / Planck least time = Planck frequency = 1.855394405 × 10^{43} Hz = S Hz

- Matter particles (multiple of Unit Electrons masses) - n × √S quanta.
- Planck least length - One 'bound treo distance' in space-matrix.
- Planck least time–1 second / S number of vibrations.
- One Unit space-matrix - Cube of S bound treo length.
- One Full kinetic / unit gravitational coloumn (S number of layers of unit space-matrix having S^2 bound treos (S^2 kinetons), supports the load of equal number or S^2 free treos of one unit mass on one graviton)
- Ground energy in 1st dimensional deformation (coloumn) - One kineton to S kinetons (sub kinetic coloumns of all photons which form EM spectrum).
- Ground energy in 2nd dimensional deformation (coloumn) - S kinetons (One orbitum) to S^2 Kinetons (

W+, W and Z Bosons of Weak and all Gluons of Strong forces).

- Ground energy in 3rd dimensional deformation (coloumn) - S^2 kinetons (One Graviton) to S^3 Kinetons.
- Ground energy in 4th dimensional deformation (coloumn) - S^3 kinetons (One Electron Black hole) to S^4 Kinetons (gravitational sphere of Unit Black hole).
- (After assigning universal constants with proposed new values, they all group together in one class and can be derived as simple multiples of cosmic rhythm (S number of vibrations per second) and they all point directly towards the possible size and life span of our universe.

✍ Speed of light	-	S bound treos distance covered in S vibrations.
✍ Gravitational constant	-	S^2 kinetons (deformed bound treos) per unit mass per second per second.
✍ Hubble constant	-	$1/S^2$ expansion of each void of space-matrix per vibration.
✍ Reduced Planck Constant	-	S free treos (one quantum) mass-energy.
✍ Planck constant	-	Angular momentum of S number of free treos which deforms one layer of unit space-matrix.
✍ One unit photon	-	Packet of S free treos.
✍ One gamma photon of 1.02 eV	-	$2\sqrt{S} \times S$ free treos.
✍ One unit electron packet of 0.51 eV	-	$\sqrt{S} \times S$ free treos ($\sqrt{S}$ quanta).

✍ One unit mass - S^2 number of free treos ($S \times S$ free treos).

✍ One electron black hole - $\sqrt{S}$ unit masses ($\sqrt{S} \times S \times S$ free treos).

✍ One unit black hole - S unit masses ($S \times S \times S$ free treos).

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1. Fine Structure Constant *The 'fine structure constant' is 'coupling constant'*. It is first time observed in this model, that it calculates the amount of localization energy required to unite two electrons having same charge which is required to generate bigger elementary particles.

2. The value of all universal constants, such as speed of light, Hubble constant, Planck constant, gravitational constant, one quanta energy, unit photon, unit electron, unit mass, unit black hole and unit space matrix etc. are all related to the Cosmic Rhythm which also marks the present age, size and total life span of universe.

* In earlier edition of the work, S was denoted as upper case C, but due to frequent confusion with constant for speed of light, it was changed to S. There is no name yet for this constant.

BACKGROUND AND RELEVANT HISTORY

This chapter will explain :

Some prevalent theories of Universe and Gravitation, how they might be tackling a few aspects but not providing a comprehensive picture, leading us to the need for a new model, concept of model dependent realism

> *"Five blind persons, those who had never seen or heard about an elephant, were asked to describe this animal only by its feel. The first person holding its leg described the Elephant like a pillar, the second person examined its belly and found it like a bag, the third person examined its tail and declared the elephant is a bottle brush, while the fourth at its ear described it to be a sheet and the fifth blind person after examining the trunk of elephant declared it to be a pipe." - Various folklore*

Same can be said about some of the concepts of our Universe and the elementary forces. Several philosophers and researchers attempting to define them have considered only their individual aspects while overlooking the complete picture.

Third dimension was needed to describe The Structure of Earth

The ability to see the spherical shape of our Earth from space is an advancement almost unimaginable about hundred years ago. Despite the inability to make a direct observation about the shape of our earth, in 320 BC Aristotle was able to hypothesize that the lunar eclipses occur due to the shadow of Earth on the Moon since the shadow is always round (and not oval as will be the case for a plate) during every eclipse, so the Earth must be spherical and not flat. The fact that Earth is spherical was supported by two more observations - In the sea, you first see the masthead of an approaching ship before you could see its body and the polar star always appears high when seen from northern seas and it appears low in the sky when seen from southern seas.

Thus we see that the concept of a spherical Earth was based on accurately interpreted keen observations made by philosophers attempting to find a simpler model of the cosmos. From the prevalent ancient beliefs of a two dimensional flat Earth, people slowly progressed to accept the concept of a three dimensional spherical Earth, which opened up new possibilities and explained the previously unexplainable phenomenon. Thus sometimes it may be necessary to look for a new dimension to explain the apparent complexities and irregularities in a model.

Euclidean and Non-Euclidean Geometry

Initially on June 10, 1854 AD, Bernhard Riemann[1] *in his elegant essay 'On the hypothesis which lies at the foundation of geometry', introduced the world for the first time, to the dazzling properties of higher-dimensional space and toppled the pillars of classical Euclidean geometry established in 300 BC.*

Euclidean geometry is the geometry of two dimensional plane surfaces where :

- *Sum of three angles of any triangle is equal to 180°.*

- *Two parallel lines when extended never meet.*

- *Shortest distance between two points is a straight line.*

Non-Euclidean geometry as proposed by Mr. Riemann, is the geometry of higher dimensional curved surfaces where **:**

- *Sum of three angles of any triangle is more / or less than 180°.*

- *Two parallel lines when extended will meet at some point.*

- *Shortest distance between two points on a curved surface is not a straight line, but the 'arc of its great circle'.*

Riemann concluded that electricity, magnetism and gravity is caused by ***crumpling of our three dimensional world in fourth dimension.*** *Thus the force has no independent life of its own, it is only the apparent effect caused by the distortion of geometry, or* ***force is based on geometry.***

Fields and Forces

For the past 330 years, since the time of Sir Newton when he wrote the equations of gravitational fields, scientists are searching for the 'field equations' of all other forces in nature.

The universal mathematical language of theoretical physicists is 'field theory'. Fields were first introduced by Michael Faraday, son of a

poor blacksmith. Faraday was a self taught genius who conducted elaborate experiments on electricity and magnetism. He visualized the 'Lines of Force' emanating from a magnet in all directions, which filled up all space. With his crude instruments he could measure all around, the strength of these lines of force, arising from a magnet or from an electric charge. Thus he 'assigned a series of numbers to these points' about direction and strength of these lines. Field is a collection of numbers defined at every point in space that completely describes the force at that point.

The Faraday's fields were plane two dimensional surfaces described by two numbers. For curvature of this surface, we need one more (third) number to describe a curved field. But in four dimensions or in any higher 'N' dimensional surfaces, we require 10 numbers or 'metric tensors' at each point to describe it, as used in 'general theory of relativity'. Secret of unification lies in expanding Riemann's metric to N dimensional space and then to cut it up in rectangular pieces. Each rectangular piece corresponds to a different force.

Further work was left for Maxwell and Einstein. In 1860 James Clark Maxwell wrote down equations for electric and magnetic fields.

The new non Euclidean Riemann's geometry for curved surfaces was later used by Einstein in his general theory of relativity to describe gravity in four dimensions of Space-Time. Though his 'metric tensors' gave him a powerful way to describe a curved surface in any dimension, but initially Einstein did not know, the precise equations that the metric tensors observe i.e. what made the sheet crumple. One of Einstein's friend gave him the precise equations, by which he could carve the theory of general relativity. After ***Newton's gravitational field equations,*** *which describe the Gravitational fields in one dimension, in 1915* ***Einstein rediscovered the field equations of gravity in his general theory of relativity.***

In 1970 the field equations (Yang-Mills field) for subatomic forces could finally be written down by utilizing the earlier work of S. N. Yang and R.

L. Mills.

But Maxwell’s description of electric and magnetic fields and Einstein’s gravitational field, limits itself to ‘what’ these fields are, but can not completely answer the vital questions : ‘how’ and ‘why’ these fields are produced ?

‘How’ and ‘why’ of fields of all four basic forces are formed, is the subject of this book. For the purpose of our day-to-day life most objects that we see around us can be described in three dimensions, but it is an incomplete description as it fails to explain the properties and phenomenon of elementary particles and of bodies in outer space. The proposed model in this book will describe the universe in five dimensions, with Time as the previously known fourth dimension, and Energy as the newly introduced fifth dimension.

How light travels trillions of kilometers through the vacuum of outer space? Experiment showed beyond question that light is a wave, and then it will require some medium for ‘waving’. All waves like sound and water waves require air and water respectively as the medium which ‘waves’. Then how can light be a wave, if there is nothing in its path to wave? Michelson’s & Moore’s experiment only proved that there is ‘no relative motion’ of Earth in stand still ether (as fish swims in water). Thus the concept of relative motion of bodies in ideal ether and ether itself vanished. But the concept of medium or matrix which curves, as postulated by Einstein in his general theory of relativity, was never denied and is talked about as space-matrix in this book. Einstein in his ‘general theory of relativity’ advocates space-time as a medium, which gets deformed in the presence of a cosmic ‘body’ e.g. Sun.

The Kaluga-Klein Theory

This Kaluga-Klein theory was proposed in 1923, it advocates the need of a fifth dimension, but they could not identify it.

This theory gives the simple explanation; If light could travel through a vacuum it was because ***the vacuum itself was vibrating in four dimensions of space-time.*** *The advantage of any 'hyper space theory' is that, the 'Maxwell fields', 'Einstein's fields' and 'Yang-Mill fields' can all be placed easily in one 'hyper space field theory'.*

The laws of nature become simpler and elegant in higher dimensions. In higher dimensions we have enough room to unify all known forces. But we can not visualize higher dimensional spaces. Our brains can only perceive up to three dimensional spaces. It may be compared to describing the color of a rose to a person who is blind since birth.

By adding a fifth dimension, the Kaluga and Klein proposed a new theory of gravity in which the light could be explained as vibrations in the fifth dimension. *Thus the force of gravity and light can be united in a simple way by describing the gravity in four dimensional space-time and keeping one dimension reserved for electro- magnetic forces out of five dimensions.*

But the theory had many difficult technical problems which rendered it useless for half century. More advanced versions are 'super gravity theory' and later on 'super string theory' which eliminated the inconsistencies of the Kaluga Klein theory.

M theories, Super string theories and the proposed Treo model all use this higher dimensional geometry in ten dimensions, in an attempt to lay down laws of physical universe.*'Super string theory' and all 'M theories' postulate that* ***all matter consists of tiny vibrating 'strings', each of 'one Planck least length'.*** *Presently M theories and all 'Super string theories' use this* ***higher dimensional geometry in ten dimensions****, in an attempt to lay down the laws of physical universe. The 'Super string theories' assume that* ***our universe initially was in ten dimensions.*** *It is broken down at each point in two parts 'one four* *dimensional, our present universe', while the rest of six dimensions 'are curled up' in 'Planck least length'.*

The M theory is not a theory by itself, but it is a collection of many theories, in which each is a description of observations in some range of physical situation. The different theories of M family may look different but they all show the same underlying phenomenon.

Newton and Gravitation

Sir Isaac Newton (1643–1727) described Gravitation as 'a force of attraction between bodies' which depends on their masses and distance at which they are placed. He calculated (1686 AD in his book; Principia) the value of 'Universal Gravitational constant (G)' as a 'force of attraction between two masses of one kilogram each, which are kept one meter apart' and described that the force of attraction is inversely proportional to the square of distance. The force F of attraction in between two unit masses of 1 kg each when kept at unit distance of one meter, is numerically equal to the constant G according to the formula :

$$\boxed{F = G\, m_1\, m_2 / r^2}$$

These were the first correct observations by which we people on Earth could get the first glimpse of the working of heavens.

With the help of the gravitational field equations he computed, where 'v' is the orbital speed of motion of a planet in gravitational field of Sun, 'r' the distance from the center of the Sun and 'M' the mass of the Sun -

Newton's equations describe the gravitational field as :

$$\boxed{MG = rv^2 = r^2a}$$

By noticing the 'fluctuations in the speed of motion of a planet in its orbit' he could even predict the existence of some undiscovered planets[2]*. This understanding of universe later on changed our lives in many ways.*

But, Mr Newton could not explain **'how' and 'why' this gravitational attraction occurs**. Many scientists so far have observed only 'what', without exploring the 'how' and 'why' of a phenomenon without which the discovery remains incomplete and sometimes provides a distorted picture, as in the above story of the Elephant.

Newton could not tell whether the 'gravitation is a long range interaction' for which no medium is required, or if it is a 'short range interaction' which requires a medium to propagate the force.[3]

Mr. Albert Einstein (1879–1955)

In 'General theory of relativity', Mr. Albert Einstein (1879–1955) could extend the 'Theory of Relativity' and 'Equivalence principle' to study the gravitational field and rightly calculated the 'configuration' and 'extent of deformation of space-time produced by Sun' as 'Schwarzschild matrix' and 'size of Schwarzschild sphere around its gravitational center'. He observed that 'Planets move straight but on a curved path' as the Sun distorts space-time around its surroundings to curve the path of planets. His general theory of relativity is a 'short range theory' but *his description of space-time distortion around a body never felt the necessity of a medium.*

Mr. Clark Maxwell *with his equations succeeded in the unification of two quite different forces of nature i.e. electricity and magnetism as one and could explain the light as electro-magnetic wave.*

One can think of Maxwell's field as being made up of waves of different wavelength. In a wave motion the field will swing from one value to another like a pendulum.

Mr. Schrödinger *with his 'Schrödinger's equations of quantum mechanics' described the whole 'Standard model of elementary particles' and 'Structure of the atom'.*

Mr. Peter Higgs *proposed 'universal Higgs fields' which penetrates everywhere in the universe.*

His description that when a particle moves in this omnipresent 'non zero energy field' the smaller particles ***e.g. photon passes unnoticed while electron feels resistance and elementary particles drag the field along with them and thus he advocated an omnipresent field which reacts to these particles.***

Peter Higgs (1929–)

For the familiar fields, such as the electromagnetic field, the lowest energy state is the one in which the field have zero value (that is, the field vanish)—if any non zero field is introduced, the energy stored in the field increases the net energy of the system. But for the Higgs field, the energy of the universe is lower if the field is not zero, but instead has a constant nonzero value. In terms of the valley metaphor, for ordinary *field the valley floor is at the location of zero field; for the Higgs, the valley has a hillock at its center (at zero field) and the lowest point of the valley forms a circle around the hillock. The universe, like a ball, comes to rest somewhere on this circular trench, which corresponds to a non-zero value of the field. That is, in its natural, lowest energy state, the universe is permeated throughout by non-zero Higgs field.*[4]

The Higgs field is a quantum field, but the fact is that all elementary particles arise as quanta of a corresponding quantum field. All fields have a property called spin, an intrinsic quantity of angular momentum that is carried by each of their particles. The masses arise from the terms in the Lagrangian that have the particles interacting with the Higgs field. ***Particles that interact with the Higgs field behave as if they have mass, which is proportional to the 'strength of the field times the strength of the interaction'.***

In Higgs based theories, the property of 'mass' is a manifestation of potential energy transferred to particles when they interact (couple) with the Higgs field; which had contained that mass in the form of energy.

It can be understood as if an elementary particle is dragging some amount of Higgs field with it's motion (these are kinetic coloumns of our proposed model which provide momentum and its localization energy which contributes to most of 'mass-energy' of all elementary particles). *Without the Higgs mechanism, the W and Z bosons that mediate the weak force would be massless, just like the photon* (to which they are related to), *and the weak interaction would be as strong as the electromagnetic one.*

Neutrinos were originally assumed to be massless, but since 1979 theorists have predicted that they have small masses, and over the past decade several impressive experiments have confirmed the predictions. The neutrino masses are less than a millionth the size of the next smallest mass, the electron mass. Because neutrinos are electrically neutral, the theoretical description of their masses is more subtle than for charged particles. Several processes contribute to the mass of each *neutrino species, and for technical reasons the actual mass value emerges from solving an equation rather than just adding the terms.*

Thus, we have understood the three ways that mass arises: The main form of mass we are familiar with that of protons and neutrons and therefore of atoms — come from the ***motion of quarks*** *bound into protons and neutrons. The proton mass would be about what it is even without the Higgs field. The* ***masses of the quarks themselves, however, and also the mass of the electron, are entirely caused by the Higgs field.*** *Those masses would vanish without the Higgs field. Last, but certainly not the least, most of the amount of super partner masses, and therefore the mass of the dark matter particle (if it is indeed the lightest super partner), comes from* ***additional interactions beyond the basic Higgs one.***

All the matter particles have spin 1/2 and all force carrier bosons have spin 1 while graviton have spin 2*. Higgs boson have spin 0. Higgs boson is neither matter nor force.*

According to the proposed ‘treo model’ in this book, Higgs boson is one stage in two dimensional deformation of unit space-matrix, where two opposite rotating magnetic vortexes completely overlaps (as deformation and counter deformation of unit space-matrix) and no more elementary particle or bigger atom of any element can be synthesized by two dimensional further deformation of unit space-matrix after this point.

Mr. Nimbu and his ‘Strings’

Group theory [5] ***:*** *The study of symmetry is called ‘group theory’. Broadly speaking there are* ***five string theories which can be combined in one M theory*** *(Type I, Type II, Type II A, Heterotic-O and Heterotic-*

E). These mathematical models of all string theories and present model rely on symmetries.

There are 7 types of Lie groups, named as A, B, C, D, E, F, G. Out of these first four A, B, C, D are labeled by integer 'n', which can be arbitrary large to make infinite numbers of these groups. Although all elementary particles can be described by these groups, but nobody could assign the value of 'n', which is arbitrary. The E, F, G allow for definite number of quarks and comes in following sets – G(2), F(3), E (6), E (7) and E(8). While E (6) describes GUT theory as it breaks down in SU (3) × SU (2) × U (1). While E (8) × E (8) is the symmetry of super strings. All 'five string theories' and 'super gravity theory' are just different approximations of one 11 dimensional M theory. The proposed model primarily rely on group theory.

Model Dependent Realism

*In 1931 Kurt Gödel, proved his famous **'Incompleteness theorem'** about the nature of mathematics. It showed that there **are problems that cannot be solved by any set of rules or procedures.***

Mathematical models are good (e.g. 'string theory' and 'super string theories') but to understand these theories, you must have a clear problem or question on which to apply this mathematics. Even the clear results of theory like P2 - two dimensional membranes, or P3 - three dimensional blobs of M theory, appear useless without a clear picture or model. In absence of a question or 'what is to be replied', all mathematics will deliver absurd answers. Thus without a guiding physical picture, pure mathematical concepts drift into speculations. Mathematics will not provide insight, it is the work of a philosopher to provide real world interpretations and develop a model. A good philosophical model should be a real, fully consistent and based on physics which can be written in the language of mathematics.

Until the development of modern physics it was the general opinion that all the knowledge of our world could be obtained through direct observation, that things are what we perceive through our senses. But modern physics clashes with every day experiences. To deal with such a paradox we can adopt an approach that is called *'model-dependent realism'*. It is based on the idea that our brain interprets the input from our sensory organs by making a model of the world. When such a model is successful at explaining things, we assign it the quality of reality or absolute truth. But there could be many different ways in which one can model the same situation by employing different fundamental elements and concepts. And we are free to adopt which ever model is more convenient.

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1. *Riemann had several nervous break downs (as he was suffering from bipolar disorder) and died poor with tuberculosis at the age of 39.*

2. *In this way Neptune was discovered but there is an interesting story behind it. John Couch Adams made predictions about the position of an unknown planet beyond Uranus in 1845 and sent his results to Astronomer royal Mr George Biddell Airy. He took no action, until the same results were announced by French astronomer Urbain Le Verrier in 1846. At last Mr George assigned this work to Professor James Challis who saw this object the same night but decided to further confirm it. Next day he delayed his arrival at the laboratory to drink tea after the dinner with his colleague. When two men reached observatory the sky had clouded over. By the time weather cleared the Neptune was already discovered by Johann Galle with Heinrich d'Arrest at Berlin Observatory. The director of Berlin observatory Mr Johann Encke, himself missed the credit of discovery of a new planet, as on 23 September 1846 (the day Mr. Urbain announced his result and the eight planet Neptune was discovered) was his birth day so he asked Mr. Galle to confirm the announced results of Mr. Urbain.*

3. *This was a period when ghosts and witches with their super natural powers and with their elusive appearances were a common belief. Newton himself has written some books on these subjects.*

4. This 'uniform, multi-layered, omnipresent field' with all its described properties was independently proposed as space-matrix (Space-Time-Energy) by the author in 2005 in his book 'Inside a wave'. (By that time the author was unaware about 'Higgs field' and 'Higgs mechanism' which was already been proposed by Mr Peter Higgs in 1965). The much publicized Higgs boson with 125 To 127 GeV/c^2 is elusive (even though it is accepted by a recent CERN

experiment). According to the proposed model, at the most the Higg's bosons can be confused with the 'area where deformation and counter deformation (two rotating magnetic vortexes) overlaps in deformation of depth of unit space-matrix'.

5. The founder of this new branch of mathematics 'Group theory' great French mathematician Evariste Galois was born in 1811. Using the power of symmetry alone, Galois as a teenager solved the problem of 'quintic (fifth power) equation' which stumped the world's greatest mathematicians for five hundred years. Galois was far ahead of his time and other mathematicians did not appreciate his path-breaking research. His three submissions were ignored or dismissed as 'incomprehensible'. He died in 1832 in a duel with pistols.

Fortunately evening before the duel, Galois had a premonition of his death. He wrote down his key findings and sent them to his friend Auguste Chevalier and desired it to be published in 'Revue Eyclopedique'.

This was not published for 14 years. A century later, the mathematicians were still puzzled over his notes, because he made references to mathematical equations that were not discovered until 25 years after his death.

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QUANTIZATION OF SPACE, MATTER AND TIME

This chapter will explain :

The importance of Planck units and the fundamentals of the new Treo model of space-matrix.

What are Planck units and what do they actually denote ?

What 'one object' and with which 'one tool of creation' the universe is 'carved' ?

What is 'cosmic rhythm' and how it governs our universe ?

How space was constructed, why it is expanding and what contracts it ?

How do we perceive the fourth dimension of Time ?

Is Energy fifth positive dimension of the universe?

What is the true nature of Energy and why is it necessary to study our universe in five dimensions?

What determines the fixed speed of light ?

What is one quanta energy which deforms space, layer by layer, in this quantum universe?

Planck Units and One object of Creation

Planck units - 'Planck least length', 'Planck least time', 'Planck mass' and 'Planck angular frequency' whisper something, but what?

Planck units were derived by Max Planck [1] in 1900. All five physical constants (Gravitational constant, Planck constant, speed of light, Coulomb constant and Boltzmann constant) in Planck units normalize to one.

Universal constants have very complicated values when expressed in arbitrarily selected metric units (arbitrary from the point of view of a physicist). Hence to build a true picture of the universe, first the universal constants must be recalculated in some sort of 'natural units'. If we want to construct a working model of the universe, we must explore these Planck units which have also been called *God's units*. It has been said that an alien civilization will have to use these units to communicate with us. This task is probably best done by replacing metric units used in the constants with Planck units, which will help to explain the meaning behind these constants more readily as we will see.

It is generally accepted that there can be no particle in the universe smaller than the Planck least length, no time period smaller than the Planck least time and thus no frequency higher than the Planck frequency. However till now it is not known, what do these Planck units physically denote. This model provides a physical picture to Planck units such as Planck least length, Planck least time, Planck mass and Planck constant. It is hypothesized in this model that the Planck units describe the structure and working of space-matrix.

Known values of some Planck units and their correlation with the new model are as given below.

Meaning of Planck units according to Treo model

1. *Planck least length* = **Length of one treo** [2]

$l_p = \sqrt{(\hbar G/c^3)} \approx 1.6158 \times 10^{-35}$ *m (Conventional value)*

2. *Planck least time* = **Time gap in between two vibrations of undeformed bound treos**

$t_p = \sqrt{(\hbar G/c^5)} \approx 0.5390 \times 10^{-43}$ *s (Conventional value)*

3. *Planck frequency* = **Number of vibrations performed by each bound treo in one second** = **S** times per second

$\omega_p = \sqrt{(c^5/\hbar G)} \approx 1.855394405 \times 10^{43}$ *Hz (Conventional value)* = S times per second

4. *Planck mass* = **One unit mass in treo model** = **S quanta mass-energy** = **S^2 free treos**

$m_p = \sqrt{(\hbar c/G)} \approx 2.1765 \times 10^{-8}$ *kg (Conventional value)*

The number $1.855394405 \times 10^{43}$ is referred to as S in this book

It is discussed in this chapter how the Planck least length calibrates the dimensions of space, the Planck least time calibrates the dimension of time, and the Planck constant calibrates the layer by layer deformation of unit space-matrix and thus in turn it also calibrates the conversion of potential energy of local space-matrix into local kinetic energy in deformed space.

Redefining Space and Time

Postulate 1 [Bound treos and Free treos] : Treos are fundamental building block of the universe which create Space, regulate the flow of Time and represent Energy.

Treos are **single object** of creation. Treo model postulates that treos are five positive dimensional primordial particles consisting of three dimensions of space, fourth dimension of time and postulated **fifth dimension** of **energy**. The properties of treo particle dictate known universal constants and also the least length, least time and least quanta of energy in our universe. Treo cannot be sub-divided and there is no unit smaller than the treo in the entire cosmos.

Treo is the fundamental building block of the universe which creates Space, regulates the flow of Time and represents Energy

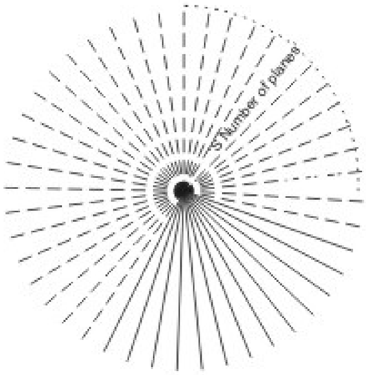
The basic questions of 'what', 'where' and 'how' are explained by five dimensions of universe, which are produced by treos. Out of these five dimensions, three dimensions of space explain 'what', fourth dimension of time explains 'where' and the proposed fifth dimension of universe, i.e. energy, will explain 'how' of this universe.

Treos exist in two forms as bound treos and free treos. It is worth noting that treos behave differently and serve a different purpose in their bound state and free state.

Bound treos are alternately bound with so called voids, forming the omnipresent uniform space-matrix of the universe. This space-matrix represents the trio of Space-Time-Energy. Bound treos creates all three dimensions of space and ground potential energy of space-matrix by its continuous vibration in all planes; somewhat like a linear cord which will occupy some space when continuously revolved in all directions. Time is perceived due to continuous change occurring per vibration (Cosmic rhythm, chap. 1). The changes that we observe in the universe are uniform expansion at each point (Hubble's law, chap. 1) and local contraction or reduction in number of planes of vibration of bound treos, to support different loads (Coloumn geometry, chap. 2).

Voids consists of curled up and uncurled parts, the curled up part of the voids constitute ‘curled up five negative dimensions’ and they are precursors of negative energy, while the uncurled part of the void is the true emptiness between bound treos of space-matrix.

'Potential Energy' in 'bound Treo'



In the absence of 'load' on space matrix each 'bound Treo' vibrates at its point by S number of times per second in '**S number of directions/ planes'** from 0^0 to 360^0 and thus produces 'potential energy of space matrix'

'Kinetic Energy' in deformed /contracted 'bound Treo'

In response to 'load' (mass momentum of 'free treos') on any 'one bound treo' (**Action** on space matrix), equal number of 'bound treos' are deformed/contract at this point to convert their 'Potential Energy' in to 'Kinetic energy' and form multilayered 'one kinetic coloumn' according to proposed 'coloumn geometry'. All kinetons of this 'one kinetic coloumn' vibrates as a unit, in the direction of 'load' to balance it by an equal & opposite **Reaction.**

Fifth dimension of energy

Diagram 1.1 : Bound Treo in Space-matrix and Dimension of Energy

Free treos condense in different numbers to form all matter. In their free state the treos accumulate to produces all photons and matter. As free treos they condense (without a void in between) to produce all photon packets, leptons and nucleons and they exert a load on the space-matrix. In response of this load exerted by packets of free treos, equal number of bound treos of space-matrix gets deformed, consequently deforming one or several layers of bound treos in the local space-matrix, roughly as a stretched sheet would deform to support a pebble.

The elusive dark matter exerting its gravitational effects are likely to be free treos (which are not confined as photon or matter packets) and are distributed as ‘one free treo on one bound treo’ in vast areas on multi-layered space-matrix.

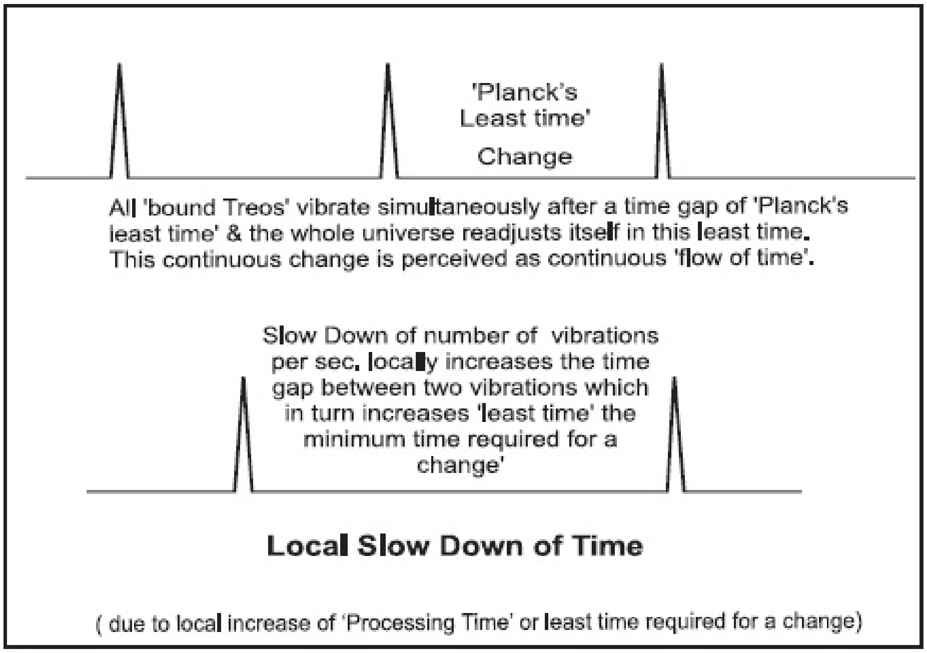
It will be described in detail in further chapters that how space, matter, all forces and forms of energy can be various manifestations of hypothesized Treo particle. This is the central theme of the Treo theory (or Treo model).

For comparison, all M string theories postulate that strings are the building blocks of the universe and strings are of Planck least length. However the Treo model is a model based on geometry and describes the physical picture of deformation of space in various dimensions and how it leads to the formation of all forces. For the first time energy has been incorporated in this model as the fifth positive dimension of the universe which generates all four basic forces by deformation of space-time.

Postulate 2 [Vibration of bound treos] : All bound treos in free (undeformed) space-matrix constantly vibrate at Planck frequency, or S number of vibrations per second in all possible S planes. This is also referred henceforth as Cosmic rhythm.

It is postulated that each bound treo of space-matrix without any applied load vibrates successively in all postulated S planes after an interval of Planck least time, or S times per second (Planck frequency), in S planes to create three dimensions of space, fourth dimension of time and fifth dimension of Energy. This represents the ground state of space-matrix.

FOURTH DIMENSION OF TIME



All 'bound Treos' vibrate simultaneously after a time gap of 'Planck's least time' & the whole universe readjusts itself in this least time. This continuous change is perceived as continuous 'flow of time'.

Slow Down of number of vibrations per sec. locally increases the time gap between two vibrations which in turn increases 'least time' the minimum time required for a change'

Local Slow Down of Time

(due to local increase of 'Processing Time' or least time required for a change)

Time :

The time gap between two vibrations is 'Planck's least time'; it is the minimum time required for any change to occur, in universe. After each vibration in this' reaction time' (processing time) the space matrix readjusts accordingly to produce a change. This constant change is perceived by us, as constant 'flow of time'.

Changes in universe :

(1) After each vibration of all bound treos of space matrix, in 'least time' each neighboring void absorbs this vibration and slowly uncurls. This simultaneously uncurling of all voids of whole universe results in accelerating expansion of universe.

(2) According to 'load' (exerted by packets of different quanta of free treos), on space matrix equal number of bound treos contract locally and convert their potential energy into local kinetic energy forming ' Kinetons'. All kinetons get arranged in a 'kinetic coloumn' according to the proposed 'coloumn geometry' which reacts and produces an 'equal and opposite reaction'.

Diagram 1.2 : Time

Deformation of Space-matrix in Increasing Dimensions leads to Creation of all Forces

Universe readjusts (either expand every where uniformly or locally contracts in response to load) at its each point (bound treo) in Planck least time after each vibration and thus produces a constant change which is perceived as the flow of time.

To support any mass-energy packet (accumulation of any number of free treos) the equal number of bound treos start vibrating in the direction of this load, by getting arranged according to proposed **coloumn geometry** which is described in more detail in the next chapter. The supporting **bound treos get 'deformed' due to curtailing of their number of planes of vibration**, and such bound treos are called **kinetons**. Vectors of all kinetons generates all type of forces which can change their form with change in geometry of deformation in different dimensions, thus fields of **four basic forces** are formed. (More details will be presented in the coming chapters) :

In the **first** dimensional deformation of space-matrix, all photons and EM waves are formed. The **electro-magnetic** forces are associated with the first dimensional deformation.

In the **second** dimensional deformation all elementary particles, atoms, ions and molecules are formed. The **weak** forces and **atomic** forces are generated due to such deformation.

The **third** and **fourth** dimensional deformation leads to the phenomenon of **gravitation** and help to support large bodies such as planets and stars, and we will see the details later in the book.

This is how at a basic level for every load the space-matrix produces an **equal and opposite reaction**, in accordance with Newton's third law. It is worth noting how in this model both load (exerted by free treos) and reaction (by deformed bound treos in forming coloumn of space-matrix) is perfectly equated, since both are executed by equal number of treos.

It is also worth noting how the **local time will slow down in deformed space-matrix by curtailing the number of vibrations of bound treos per second**. Every physical (even chemical or biological) reaction requires a minimum processing time. Thus all processes including biological aging will slow down in deformed local space-matrix (with increasing gravitational fields), along with slow down of reaction time.

Postulate 3 [Uncurling of voids] : Voids are curled up five negative dimensions of universe which are uncurling by (Planck least length divided by S^2) with each vibration of cosmic rhythm by absorbing the energy of neighboring bound treos.

All voids were fully curled up just after the Big Bang at the time of birth of universe. Each void absorbs energy of vibration of adjacent bound treos of space-matrix to uncurl themselves, thus they represent negative energy. All voids, with their five negative dimensions have no dimension of length, no dimension of depth and no dimension of breadth and they counting the consumed time of universe. All of them are slowly uncurling simultaneously, to expand the whole universe.

With the uncurling of these voids at each point of the universe, balloon like expansion is occurring. Each void of space-matrix uncurls by (one Planck least length / S^2) per vibration, and thus expands our universe. To find the expansion of a void in one second, we know that there are S vibrations occurring per second in undeformed space-matrix, so each void of the space-matrix uncurls by (Planck least length / S^2) × S per second = (Planck least length / S) per second.

Interestingly everything will be expanding in the same proportion so relatively all objects will appear to be of the same size despite such expansion (due to absence of any absolutely fixed frame of reference for length or time).

As the universe is constantly changing and ‘aging’ with expansion, so there is no past or future which can be visited by us and hence the fictional ‘time machine’ is actually not possible. The continuous change, which occurs at the speed of light, denotes the rate of flow of time / rate of change / the speed of reaction or processing time of universe [D.1.2].

The kinetic energy of vibration of bound treos is continuously getting converted into potential energy of universe by uncurling of voids, causing increase in entropy and expansion of universe.

The present uncurled size of voids can also indicate the present size and consumed life span of the universe. Uncurled part of voids can be calculated based on the above rate of uncurling and number of cosmic vibrations (based on known age of universe) since the big bang, and we can see that still the uncurled part of voids (emptiness between bound treos) in free space is likely to be very much smaller than the space occupied by the adjoining bound treos which have a dimension of Planck least length.

The universe was born with a pre-assigned life span of S^2 vibrations. As the voids are uncurling by (Planck least length / S^2) in each vibration since the birth of the universe, so it should take S^2 vibrations for the void to become equal to the size of adjoining bound treo of Planck least length. This will lead to instability and disintegration of the fabric of space-matrix where all bound treos will essentially become unsupported free treos, causing the Big crunch and thus completing one life cycle of the universe. This Big crunch could be immediately followed by the Big bang leading to a new baby universe with completely curled up voids. The new baby universe thus born at its maximum kinetic energy state, will expand slowly by uncurling of its voids, to live its next lifespan of

S^2 vibrations.[3]

The uncurling force of voids responsible for expansion of universe is possibly the **dark energy** of the universe. This dark energy prevents the universe from collapsing and it is a sort of ‘cosmological constant’.

It might be interesting that the voids may curl back again to different degrees in certain regions of space, to accommodate the deformation / contraction of adjoining bound treos which are subjected to load, with the consequent slow down of local time.

There are fixed number of nucleons in the universe. Composite particles of Nucleons, with basic structure of quark can only be formed by two opposite rotating vortexes (deformation and counter deformation of second dimension responsible for condensation of nucleons as atoms of all elements of periodic table) which acted from all spatial directions, in the ‘era of nucleosynthesis’ just after the birth of universe, when the contraction of universe matched with the required amount of deformation,in which nucleons can condense.

Soon after the Big Bang the voids started getting uncurled. *After a critical time and at a critical density of space substance, referred as ‘era of nucleon-synthesis’, about 6% of total free treos in the baby universe condensed as nucleons with base line structure of quarks*. In this highly deformed and contracted baby universe, it condensed matter by opposite rotating vortexes at the same time and constructed Neutron packets (two down and one up quark) and Proton packets (two up and one down quark). No further nucleons have formed ever since, since the state of universe is now much less dense and less deformed.

Redefining Universal constants as per the Treo Model

Speed of Light [c] : Translational motion of photon packet from ‘one bound treo to the next bound treo in one least time’ denotes the Speed of light.

Propulsion of photon packet / or signal from one bound treo to the next bound treo in least time is the universal speed of translational motion of photon packet (or any signal) on undeformed space-matrix. It is a universal constant as it depends on two fixed parameters, the space occupied by each bound treo of Planck least length and their rate of vibration at Planck frequency.

On calculation,

The photon will cover 1 bound treo distance per vibration, which is (1 bound treo length + 1 uncurled void length) per vibration

= S vibrations per second × 1 bound treo distance per vibration

= S vibrations per second × (1 Planck least length + 1 uncurled void length) per vibration

≈ S vibrations per second × (1 Planck least length distance) , ignoring the uncurled void length since in the present state of universe the uncurled voids are much smaller than treos

≈ $1.855394405 \times 10^{43}$ per second × $1.615788303 \times 10^{-35}$ meter

≈ *$2.997924577 \times 10^{8}$ meter per second.* ***This value is the known speed of light in free space, and it provides basis to the Treo model.***

≈ *3×10^{5} km per second.*

Based on the above calculation, we can say that S bound treo distance per second denotes the speed of light.[4]

Wave-particle duality *of photons (and of all elementary particles)* is due to spread of each free treo of its mass-energy packet on equal number of kinetons present in its all supporting deformed bound treos of space-matrix which are arranged in the shape of kinetic coloumns and thus it can move (at the speed of light) in wave motion.

(1) Photons (and other elementary particles) while moving in the wave motion **spread their mass-energy of free treos on equal number of kinetons** (present in all sub kinetic coloumns along its wave length) and thus **photon behave as mass-less boson**. This characteristics of all mass energy to spread itself, is responsible to execute the phenomenon of ‘interference by photons, electrons and all elementary particles‘; to execute weak forces i.e. transportation of alpha and beta particles by W and Z bosons’ and in ‘quantum tunneling’ etc.

(2) Photons (and other elementary particles) can condense in packets of free treos, which spread uniformly on each bound treo along their particular wave length and then they behave as particles. This characteristic is responsible for ‘photo electric effect’ exhibited by photons.

Motion of free treo packets of electrons on space-matrix is electric current. One ‘unit electron’ mass-energy packet is one unit electric charge of one electron-volt.

Rotation of supporting kinetic coloumns of deformed bound treos distributed along the entire wave length of any mass-energy packet, cumulatively generates its magnetic field.

Hubble’s law and Hubble’s constant [H_0] in treo model: Simultaneous slow uncurling of all curled up

voids at each cosmic vibration explains the
'Accelerating expansion of the Universe'.

It is known that our universe is constantly expanding at each point like an inflating balloon. Thus the distance between any two points in the universe is constantly increasing and all the galaxies are getting apart. It means that 'if the expansion in one kilometer distance is calculated, then the expansion in two kilometer distance will be its double and in three kilometer distance, it will be triple of the expansion for one kilometer'.

The accepted size of our present universe is approximately 13.7 billion light years which is expanding at its periphery with the speed of light.

So to arrive at the current size and age of the universe, the universe would have had to expand for 13.7 billion years.

In terms of number of vibrations, the age of universe translates to $13.7 \times 10^9 \times 365 \times 24 \times 60 \times 60 \times S$ vibrations $\approx 8 \times 10^{60}$ vibrations.

Conventionally Hubble's law states that $v = H_0 \times D$

Hubble's constant *i.e.* H_0 *is the constant of proportionality indicating the rate of expansion, 'v' is velocity of receding galaxy and 'D' is the distance of galaxy: the present accepted value is 71.4 Km per second is* ***rate of expansion at the distance of 3.2 mega parsec, when universe is expanding at the speed of light****.*

As per the Treo model, the universe did not start at a single point, however it was in a fully contracted state and of a substantial size, thus there is no need to assume that the universe started at a point. Inferred from many observations the hypothesized size of universe is of 10^{86} layers out of which most are deformed and contracted with the contraction of space matrix to support its different loads.

It consisted of S^2 layers of Treos in its radius and completely curled up voids in between each layer.

Since then, each void is uncurling at the rate of 1 Planck least length / S^2 per vibration of cosmic rhythm, i.e. S times per second.

Thus the cumulative expansion in S^2 voids of the universe is always 1 Planck least length per vibration, which is also the speed of light.

As per the Treo model there are a total of S^2 or roughly 3.44×10^{86} vibrations possible in the life span of universe, as up to this time each void will fully uncurl equal to the length of adjoining bound treo, causing all bound treo and void to annihilate each other and cause the Big Crunch. Beyond this size of void, the structure of space-matrix will disintegrate as the gaps between the treos will be larger than the length of treo itself.

According to the Treo model, the universe is expanding due to two reasons:

(1) All curled up voids (five negative dimensions of universe) of space matrix are uncurling at each point in universe by "Planck least length / S^2" and with S^2 contracted layers in radius of present size of universe, the periphery of universe is continuously swelling up at the speed of light i.e. one Planck least length per vibration.

(2) Local Space matrix is being constantly flattened out (un-contracting or uncurling) by slowly getting rid of its deformation, and this is accelerating the rate of expansion.

(as all matter which exert load is first gathered by gravitational attraction and then it is churned out in black holes and gravitational spheres. After this churning by gravitational waves the matter is converted in *Hawkings pairs of positive and negative energy particles* (i.e. treo and voids of proposed model)[5]

Constant expansion of the universe results in

(1) Universe and every thing including living creatures to ‘age’.

(2) Constant expansion act as 'Cosmological constant' which prevent universe from collapsing and maintains the tensile strength of space matrix.

(3) With expansion of universe in the end when the separation in between two layers will reach upto one Planck least length the fabric of universe (structure of space matrix) will not sustain and big crunch will occur.

(4) Due to accelerating expansion the Planck values and other values of all universal constants are actually changing while their relative values will remain same.

(5) Total potential energy of universe is increasing while its kinetic energy is decreasing by continuous expansion.

Present size of universe

(1) Number of voids in radius of universe = S^2

(2) Present size of each void = Number of vibrations so far × Increase in size of void per vibration $\approx 8 \times 10^{60}$ × One Planck least length / S^2

(3) Size of universe is thus determined by multiplication of above two values $\approx 8 \times 10^{60}$ Planck least lengths *(13.7 billion light years)*.

Treo model also explains,

Hubble’s Time $1 / H_0 = 1 / (1 / S^2)$ per vibration = S^2 vibrations; which is the total life span of universe from ‘big bang’ up to the time of ‘big crunch’. At this imaginary time the length of fully uncurled void will be same as the length of a treo, which is one Planck least length.

Hubble’s Length $1 / H_0 \times c = D_u = S^2$ voids (as bound treos has only one dimension of length)

Gravitational constant [G] : In treo model,
Gravitation helps to support a body by space-matrix and when the value of Gravitational constant is recalculated, it explains that load of one free treo is supported by one bound treo.

$G \approx 6.67384 \times 10^{-11}$ *meter*^{3} *per kg, per sec per sec (Dimensional Formula* $L^3 M^{-1} T^{-2}$*) (conventional value).*

‘G’ can be expressed in terms of number of deformed bound treos (kinetons) by substituting the value of meter (which is an assumed unit of length) by natural units of number of bound treos per meter (or number of Planck least lengths per meter, ignoring voids).

$\approx 6.67384 \times 10^{-11} \times$ (Number of bound treos lengths in one metre $)^3$ per kg per sec per sec.

$\approx 6.67384 \times 10^{-11} \times$ (1 / Planck least length in units of metre $)^3$ per kg per sec per sec.

$\approx 6.67384 \times 10^{-11} \times (1 / 1.6158 \times 10^{-35})^3$ per kg per sec per sec.

$\approx 1.582 \times 10^{94}$ kinetons per kg, supporting it per second per second.

It also means that this number of kinetons act on 1 kg mass per second per second. As these bound treos (kinetons) will support equal number of ‘free treos’, so 1.582×10^{94} ‘free treos’ can be said to constitute one kg mass.

Reduced Planck constant [ħ] and Planck constant [h] : Reduced Planck constant represents a quantum of energy which consists of S number of free treos. This is defined as one quanta energy in the Treo model. Planck constant is the angular momentum of this one quanta mass-energy which deforms one layer of unit space-matrix and calibrates layer-by-layer deformation of space-matrix.

Planck constant is a universal constant which has been said to be the quanta of unit action, but till date it has not been described in much detail. *The dimensional formula of Planck constant is the same as that of angular momentum* ($M L^2 T^{-1}$), but the unanswered question remains - If Planck constant is indeed representing angular momentum of something, then what is that object or particle ?

1) Planck constant h

$\approx 6.6262 \times 10^{-34}$ *Joule-second (Conventional value of Planck constant)*

Planck constant is the value of unit minimum action which occurs in S number of vibrations, since one second consists of S vibrations.

Taking the value per second, it will be

≈ 6.6262×10^{-34} Joule

2) *Reduced Planck constant ħ = h / 2π by definition*

Taking it per second, it will be

= h / 2π per second

≈ 6.6262×10^{-34} / 6.2857 (i.e. value of 2π) Joule

≈ 1.0542×10^{-34} Joule

3) The mass of above one quanta energy, using Einstein's mass-energy equivalence $m = E / c^2$

≈ 1.0542×10^{-34} Joule / *(2.998×10^8 meter per second)^2*

≈ 1.173×10^{-51} kg

4) Number of free treos in mass of one quanta energy, taking 1 kg mass to be 1.582×10^{94} number of free treos, using gravitational constant fundamentals of treo model.

≈ 1.582×10^{94} number of free treos per kg × 1.173×10^{-51} kg mass of one quanta energy

≈ 1.855394×10^{43} treos, **which happens to match with S number, providing a basis to the treo model and proposed inter-relationships**

= This is equivalent to S number of free treos

Thus we see that one quantum energy represented by reduced Planck constant is energy of S number of free treos.

For comparison, we will see later that **1 Planck mass = 1 unit mass = S**

quanta masses = S × S free treos ≈ 3.44×10^{86} free treos ≈ 2.17×10^{-8} kg

Fine structure constant [α] : Fine structure constant calibrates the amount of localization energy required to unite one additional electron (having same charge) at each quantum level of second dimension.

It is known that **all elementary particles** *have their composite masses which are* **integral multiple of 35.01 MeV**.

It is noted for the first time, that rest mass-energy of unit electron of 0.51 Mev, **when divided by twice of the 'fine structure constant',** equates to the composite mass-energy of the unit electron i.e. 35.01 MeV.

0.51 MeV / (2 / 137) ≈ 35.01 MeV

It is postulated that this is the localization energy needed to unite two same charged unit electrons and thus form 8 types of gluons of atomic forces. This localizing energy (gluons) is like cementing material which is needed to unite bricks (unit electrons) to construct structures of different size and shape (all elementary particles) at different quantum levels (with different number of bricks).

Understanding Fine structure constant by some other relations

(1) Speed of light × 1/137 = Speed of Electron in Bohr's model atom.

Radius (layers of kinetic coloumn) in Bohr model of electron, decides the orbital speed of electron.

(2) Bohr radius of electron in Hydrogen atom (smallest radius of

electron in Hydrogen atom)

≈ 32.7225×10^{23} bound treo distance

≈ (5.29×10^{4} fm) multiplied by 1/137

≈ 0.386×10^{-12} m is the Reduced Compton wavelength of electron.

(3) Reduced Compton wavelength 0.386×10^{-12} m multiplied by 1/137 = Classical radius of electron (2.82 fm).

The constant S : Cosmic rhythm at 'S vibrations per second' regulates our Universe and decides the value of all Universal Constants

As we can appreciate from the examples above, dimension-less S number i.e. 1.855×10^{43} or the 'Cosmic rhythm' governs the whole creation.

(1) S number of free treos is one quanta mass-energy and its value is reduced Planck constant.

(2) These S number of free treos or 'one quantum mass energy' is the mass-energy of unit photon of 1Hz frequency.

(3) Angular momentum of this one quanta mass-energy or S number of free treos is the value of Planck Constant.

(4) S number of bound treo distance is covered by light in S vibrations

(i.e. in one second).

(5) Each bound treo vibrates S number of times per second in S number of planes and thus generates potential energy of space-matrix [D.1.1]

(6) S number of deformed bound treos or Kinetons are in 'one quantum kinetic energy'.

(7) S^2 bound treo (kinetons) per unit mass per sec. per sec. is the revised value of gravitational constant.

(8) S^2 free treos are in 'one unit mass', it is also called the Planck mass of 2.16×10^{-8} kg which is supported at one graviton (unit gravitational center), by energy of 1.95×10^{9} J present in one full kinetic / unit gravitational coloumn (Coloumn is a structure composed of equal number of deformed bound treos which are arranged according to the proposed coloumn geometry to support the load, as explained under Coloumn geometry). One unit mass is upper limit of load which can be supported at any one bound treo (by one graviton) in universe.

- When the energy of graviton is multiplied by number of bound treos in one meter we get the Planck force of 10^{44} J meter (energy supporting one unit mass in J × one meter = one Newton or J. meter) and it is tensile strength of space-matrix. The field strength of space-matrix, or the tension of 'bound treos' when calculated in one meter is of the order of 'Planck force' $F_p = m_p c / t_p = c^4/G = 1.21027 \times 10^{44}$ Newton (natural units of momentum divided by the natural unit of Time).

- When the energy of graviton is multiplied by number of bound treos in one meter cube we get the Planck energy of 10^{113} J (maximum energy concentration on space-matrix)

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1. *By many accounts the personal life of the renowned German theoretical physicist Mr. Max Planck (1858–1947) was tragic. He had four children, two sons and two daughters, from his first wife. His elder son died in the First World War, the elder daughter died during her first child*

birth and younger one married the husband deceased elder daughter and she too died during child birth. His last surviving son was caught and executed in the year 1945, in Nazi Germany while plotting to kill Hitler.

2. Fundamental particle of creation is first time being named as ‘treo’ in this model. ‘Quintessence’ or ‘vacuum energy’ or ‘God’s particle’ or simply ‘string’ are other names used by scientists for this basic particle of universe. For the first time Energy has been incorporated in this model as the fifth positive dimension of the universe which forms the treo along with four dimensions of space-time.

‘One treo’ of ‘Planck least length’ is ‘one string’, which is present in only one dimension of length and of the size of Planck length, as commonly used for calculations in all ‘string’ & ‘super string theories’.

3. *In Hindu mythology, the universe is governed by* ***Trideva;*** *out of which* ***Brahma*** *is ‘****Shrastha*** *— or Creator of all Space and Matter’,* ***Vishnu*** *is ‘****Paalak*** *—Source of all energy which sustains life’ while* ***Shiva*** *is ‘****Destroyer*** *who will destroy everything with cosmic dance i.e. Flow of time’.*

4. *Symmetry of physical system is equivalent to the ‘Law of conservation of momentum’. Conservation of momentum is a consequence of translational invariance. This translation slides an object (photon packet) in one dimension along a ‘line segment’.*

5. *One parsec is 3.26 light years distance, or 30.857 pentameters (1 pentameter=*10^{15} *meters); One mega parsec = One million parsecs.*

▣▣

UNIT SPACE MATRIX AND COLOUMN GEOMETRY

This chapter will explain :

Unit space-matrix, Coloumn Geometry, Formation of quantum levels, Wavelength and Frequency, different Loads on Space-matrix.

String theory compared with the Treo Model

The space has not been considered empty even in the past, and it has been characterized as a substance. Properties of all the objects around us are due to curvature of space [1].

The Super string theory proposed by Michael Green and John Schwarz in 1984 assumes that the ultimate building blocks of nature consist of tiny vibrating strings. Fundamental forces and many particles found in nature are nothing more than different modes of vibrating strings.

The problem with these string theories is inherent, as they are only mathematical models designed by the scientists to explain what of this universe, so they created the pieces of jig-saw puzzle which unless analyzed and arranged in a proper framework remains unexplainable. Scientists have gone up to the extent that if the desired results are not obtained they can twist the theory, as any desired result can always be obtained by canceling the infinities in their equations.

Instead of twisting the theory, a slight twist in the beliefs is required to see the true picture of nature. The strings as described in all string theories and super gravity theories only describe the properties of one newly proposed energy particle, which has been named as treo (for the first time) in this treo model. The mathematical models of strings, super strings, super gravity and M theories describe some properties of bound treos and of unit space-matrix; but again fails to deliver a complete model.

According to the M theory the strings are just one member of wide class of objects which can be extended in more than one dimension i.e. P brans.

P bran has length in P directions.

P1 bran is a string, which is one vibrating bound treo in the treo model and S number of such bound treos are placed in one line which form one side of the cube of one unit space-matrix.

P2 bran is a two dimensional membrane, described as one page or one sheet of unit space-matrix in treo model, which mediate two dimensional deformation of unit space-matrix.

P3 bran is a three dimensional blob, named as **electron black hole** produced by three dimensional deformation in the proposed model, but in string theory higher values of P are also possible up to 9, in ten or eleven dimensional space-time.

M theory allows curled up extra dimension in internal space only in a prescribed way which may be the voids as described in the present model.

The gravitational interactions are caused by the lowest vibratory mode *of a circular string* (named as graviton in the Treo model). Higher excitations of the strings (orbitums of the Treo model) support all elementary particles and all matter. At last, the strings serve as the basic object, in the direction to solve the problem and indicates that the gravitational force can also be combined with the other three forces.

In the string theory, filaments of billions of light year long have been pictured which bind together multiple galaxies or group of galactic clusters and are the binding agent of the whole universe. The filaments as predicted by mathematical model of these theories, can be explained by this treo model as gravitational coloumns of these cosmic bodies or of black holes which fuse together to form structure of galaxy. Very long cosmic strings as predicted by the string theory can be formed by fusion of multiple full kinetic / unit gravitational coloumns of the treo model, each of which supports the load of one unit mass. Uniform revolving speed of outer and inner stars in a spiral galaxy can be explained by these revolving gravitational coloumns of multiple black hole present in its galactic nucleus, along with simultaneous effect of expansion of universe at each point which becomes significant when great distances are involved. In the proposed treo model the planetary orbits and electron orbits are kept in the same frame which thus unites quantum world with general theory of relativity.

Deformation of space-matrix

In a general sense, the free treos have some mass pressure and they tend to deform the supporting space-matrix in a similar manner as a pebble would when placed on a tightly stretched sheet. To support the pebble, the sheet gets deformed and takes a particular shape which depend on properties of the sheet such as the elasticity and its thickness and also on size and density of pebble. As we can visualize from the above example, the higher the density of the pebble, the deeper will be the deformation created in the sheet. The deformation will take a specific shape in accordance with the mass and density of the pebble.

So we can now relate pebble with the free treo packet, the sheet with the space-matrix, the deformation pattern formed is the coloumn and the portions in the sheet which correspond to the deepest part of the conical deformation in contact with the pebble are the apex bound treos of the coloumn. It is worth observing that the complete conical pit formed in the sheet helps to support the deepest points of the sheet to bear the load of the pebble, by dissipating the mass pressure of the pebble throughout the deformation pattern of the sheet.

The term load has a very specific definition in the Treo model. To understand load, first we will define coloumn and apex bound treos more formally.

In first and second dimensional deformation for all moving photon packets and for all elementary particles

Coloumn : Each one coloumn is the arrangement of deformed bound treos (kinetons) of the space matrix in a particular pattern according to proposed Coloumn geometry, which support a load of equal number of free treos of mass-energy packet. Each such coloumn, now called 'sub-kinetic coloumn' form similar deformation pattern. The mass-energy packet is spread out over its entire wavelength and is supported by sub-kinetic coloumns on each apex bound treo along this wave length.

Apex bound treo : The apex bound treo lies at the apex of supporting sub - kinetic coloumn. The apex bound treo can be assumed to be in direct contact with the mass-energy packet. Multiple such apex bound treos and hence the multiple sub-kinetic coloumns are utilized to support the equally divided load of mass-energy packet along its wavelength (wavelength is redefined as spread of mass energy packet along its length).

Load : It is defined as the number of free treos in the mass-energy packet distributed on each apex bound treo in one Reduced Compton wavelength (half of one sine wave).

Load = Mass-energy in packet / Number of apex bound treos in one wavelength

Load at gravitational center of all stationary multiple unit mass bodies in third and fourth dimensional deformation

In third and fourth dimension the full Mass pressure of multiple unit mass body at its gravitational center is exerted on space matrix in each of S planes (forming a pit) and in turn this total Load of body is supported from all S directions

Load = frequency × number of unit masses in body.

The space-matrix perceives load at the apex bound treo as the 'action' and thus 'reacts' to it by deforming equal number of bound treos and arranging them in the shape of coloumns according to the proposed coloumn geometry as explained later. Such deformed bound treos which are part of the coloumns are named as kinetons.

The **deformation of space-matrix in response to applied load** is the **single tool** used to carve the whole universe. All forces and matter are produced by the thus changing geometry of space-matrix in increasing number of dimensions. The uniform, omnipresent space-matrix reacts in the same manner everywhere in the universe.

As earlier mentioned, all bound treos of space matrix which are not subjected to any load, simultaneously vibrate at cosmic rhythm or S times per second in all S planes.

All mass-energy packets of free treos e.g. photon packet, electron, neutron etc. exert a load on the space-matrix. In the presence of such free treo packets, **equal number** of bound treos of space-matrix react, by deforming and arranging themselves in an organized form, named as a **coloumn**. Each coloumn is composed of equal number of deformed bound treos which support the load of free treos. The coloumn is formed by curtailing the planes of vibration of bound treos and directing the energy of these vibrations towards the load to balance it. The reduced planes of vibration of bound treos causes them to occupy less space and hence making them appear deformed. The coloumn focuses its total kinetic energy towards its so called apex, where the load is present, by directing the force of vibration of all its bound treos towards the load, increasing the number of layers in the coloumn as necessary till the load balances out completely. Thus increasing load on the space-matrix will lead to increasing contraction and local deformation of space-matrix by adding proportionate number, of deformed bound treos in additional layers of coloumn.

With increasing free treo load on one bound treo, space-matrix deforms layer by layer to support the load. The unit space-matrix is a cubical space consisting of S^3 bound treos, and its deformation occurs at **√S number of quantum levels in each dimension**, leading to the formation and support of all photons and EM waves (in first dimensional deformation of length); matter particles, strong and weak forces (in second dimensional deformation of length and depth); physical bodies form gravitational field (by deformation of all dimensions of space in third dimensional deformation of unit space matrix); finally cosmic bodies and black holes form gravitational spheres (in fourth dimension involving time as well). The increasing angular momentum (with increasing mass-energy) at √S quantum levels in each dimension carves the space-matrix and regulates its deformation in all four dimensions of space-time, to generate matter **and all basic four forces.**

It is postulated in this model that the kinetic energy of local bound treos in space-matrix increase due to curtailing of their plane of vibrations and then they start vibrating in the direction of load instead of vibrating in all planes. This results in change of area occupied by this bound treo and it deforms and contracts the local space-matrix. Such bound treos at higher kinetic energy levels are now named as kinetons and are building blocks of kinetic coloumns. It can be compared to curtailing of thermodynamic degree of freedom of photon gas.

Whenever one of the parameter of space-matrix changes, its other two parameters also change instantly. In other words, the shape of space and degrees of freedom at a point in space based on number of planes of vibration of bound treo, its local frequency of vibration perceived as the flow of time at that point and the local potential energy of space are all inter-related, depending on load applied on the space-matrix by free treos. By such a deformation of the space-matrix (and by formation of coloumn), each load is supported.

A quick recap of relationship between **space-matrix parameters** is as follows :

Higher **load** on space-matrix => Lower **number of planes** of vibration of bound treos => Contracted space

Higher load on space-matrix => Lower **potential energy** => Higher **kinetic energy**

Thus by exertion of load space contracts and local kinetic energy increases.

One Unit Space-matrix : The boundary of three dimensional deformation

Unit space-matrix as described here, does not divide the uniform space-matrix of our universe in chambers, but this is the limiting boundary which can be counted from any point (bound treo) at which the deformation of space-matrix can increase while increasing in increasing number of dimensions of space-time. Thus this cuboid space can be counted from any point in this omnipresent space-matrix of universe, where the load dependent deformation of space-matrix starts and increases.

For ease of understanding, one vibrating bound treo is roughly assumed to occupy the space equivalent to one Planck least length, ignoring the space occupied by in-between curled up voids. S bound treos are present in one line which form one side of the cube of one unit space-matrix.

We can remember the structure of one unit space-matrix by comparing it with a cuboid book. This book has S number of Planck least length (S bound treos) as identical alphabets in **one line** and S lines in one page all in length of unit space matrix , S number of such lines of breadth on this **one page** (S^2 bound treos), S number of such pages are in breadth, in this **one book** (S^3 bound treos which forms one unit space-matrix), which all can vibrate simultaneously S times in one second (per second) i.e continuously.

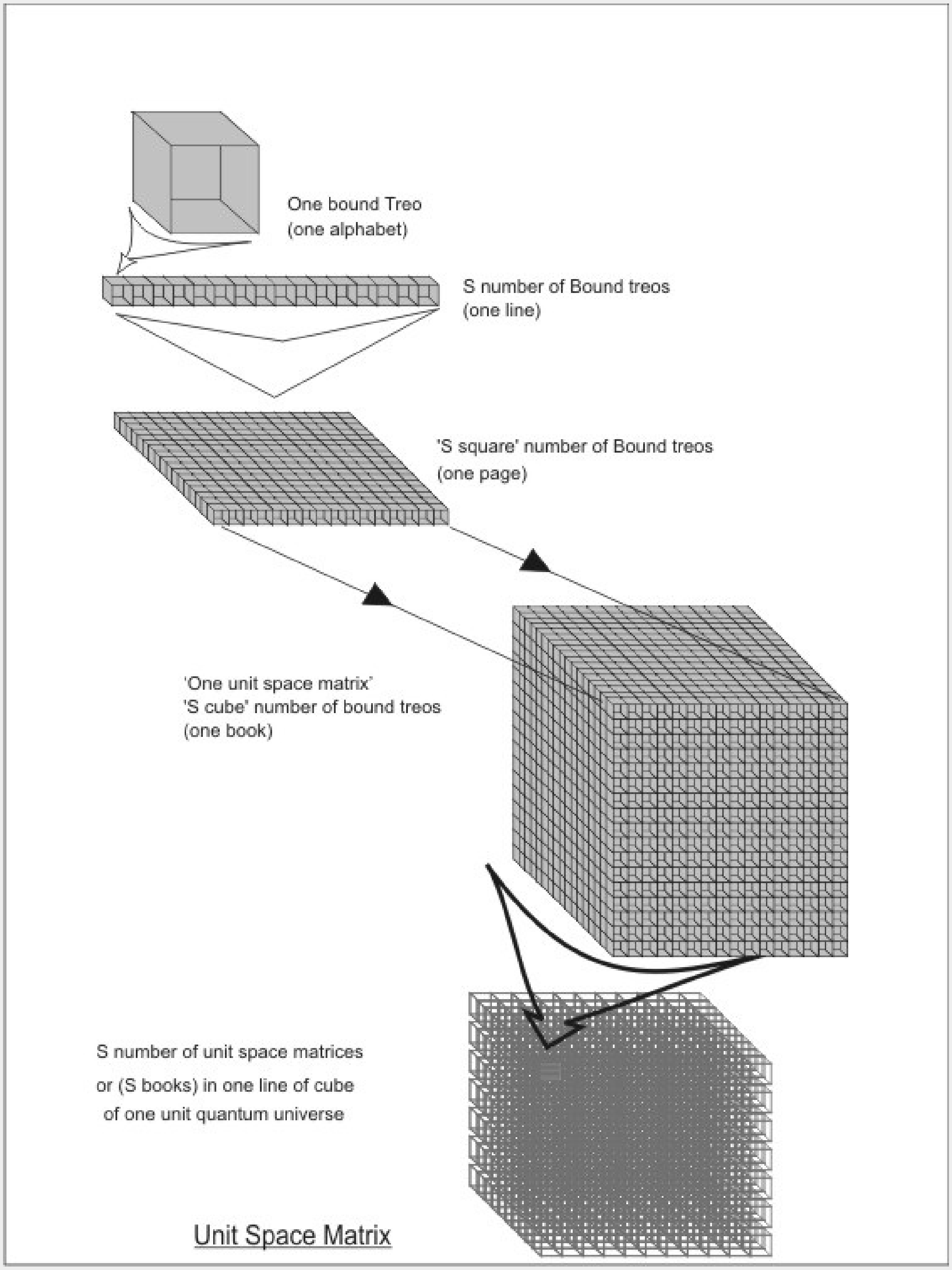

One bound Treo
(one alphabet)
S number of Bound treos
(one line)
'S square' number of Bound treos
(one page)
'One unit space matrix'
'S cube' number of bound treos
(one book)
S number of unit space matrices
or (S books) in one line of cube
of one unit quantum universe
Unit Space Matrix

Diagram 2.1 : Three Dimensions of Space in Quantum Universe

In this cosmic library S such unit space matrices are in one line on one side of the cube of undeformed unit universe [2] in which S^3 number of such books constitute the cube of our one unit universe.

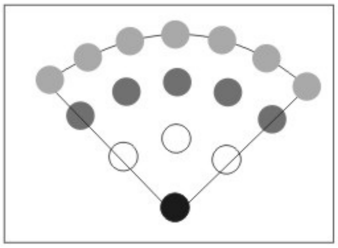
The boundary of proposed one unit space-matrix is decided by space time itself, as all S^3 bound treos vibrates simultaneously at Planck frequency or S times per second in free space.**Thus the quantum levels in each dimension of space-time and quantum boundaries as one unit space-matrix are decided by this particular cosmic rhythm** which dominates and carves this one bran i.e. layer, which is called our universe, out of multivera (out of multiple universes arranged like peels of an onion, along with their different cosmic rhythms which decide their different individual ‘universal constants’ is proposed in this model).

The deformation of space-matrix is according to the proposed coloumn geometry, progressively increase in first, second, third and fourth dimension and produces different geometric formation in each dimension to increase its kinetic energy.

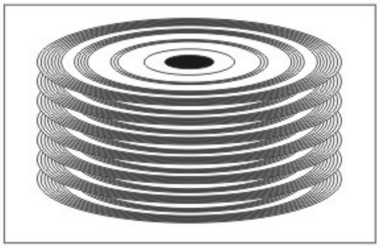
Formation of Coloumns and Force fields - Coloumn Geometry

The kinetic energy increases by formation of bigger kinetic coloumns at $\sqrt{S}$ quantum levels in each dimension[3] which supports the increasing load. It increases upto maximum of one quanta (to support S free treos load of a gamma photon packet) in first dimension, S quanta (at one graviton to support S^2 free treos of one unit mass) in second dimension, S unit masses load (or S^3 free treos load) by S gravitons in third dimension and S^2 unit masses (S^4 free treos load of a unit black hole) by S^2 gravitons deformed in fourth dimension. All four basic forces erupts by this deformation of one unit space-matrix in increasing number of dimensions.

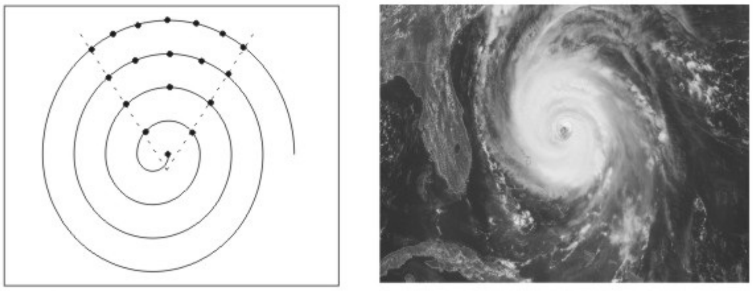
In each dimension by increase of mass energy by one unit, it increases 2n–1 kinetic energy units at n^{th} quantum level in each n^{th} layer of any kinetic coloumn. These units are one kinetons in first dimension, orbitums (S kinetons) in second, graviton (S^2 kinetons) in third and one electron black hole (S^3 kinetons) in fourth dimension.



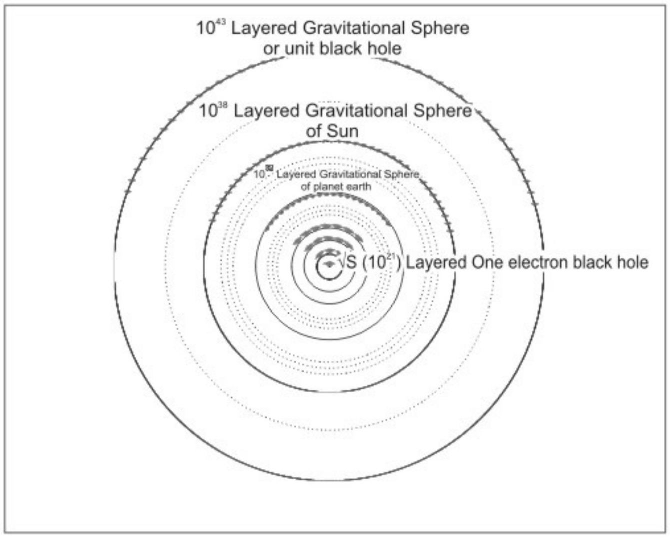
2n -1 Kinetons in first dimension in n th layer of each sub kinetic coloumn in wave length



2n-1 Orbitums in second dimension in n th subshell of each shell in wave length



2n -1 Gravitons in third dimension, at n th quantum level (circle) in wave of 'electron black hole'


10^{43} Layered Gravitational Sphere or unit black hole
10^{38} Layered Gravitational Sphere of Sun
$10^{[illegible]}$ Layered Gravitational Sphere of planet earth
$\sqrt{S}$ (10^{21}) Layered One electron black hole

2n- l 'Electron black holes' in fourth dimension at n th quantum level in 'gravitational sphere' of cosmic bodies

Changing Geometry of deformation in four dimensions of space time

Diagram 2.2 : Changing geometry with increasing deformation in all four dimensions

The key pattern of deformation of space-matrix, is named as Coloumn geometry* in the Treo model. [4]

[* Coloumn geometry governing the deformation of space-matrix in all four dimension has been hypothesized for the first time in the treo model which was published in my first book "INSIDE A WAVE", Manas Prakashan, 2005.]

The deformation of space-matrix occurs in two ways :

(A) Linear deformation

(B) Angular radial deformation

The linear deformation and angular radial deformation occurs simultaneously but for the sake of description they are explained separately.

(A) Linear Deformation in Each Dimension

$2n-1$ units in each nth layer and total n^2 in n layered kinetic coloumn

This pattern is observed universally in layer by layer deformation of unit space-matrix in all dimensions (1, $1 + 3 = 4$ or 2^2, $1 + 3 + 5 = 9$ or 3^2, $1 + 3 + 5 + 7 = 16$ or 4^2, $1 + 3 + 5 + 7 + 9 = 25$ or 5^2, $1 + 3 + 5 + 7 + 9 +$

11 = 36 or 6^2 and so on...).

The coloumn geometry obeys inverse square law. The gravitational field, magnetic field, intensity of light, charge density all fade (which is reciprocal of the square of its distance) according to this geometry of deformed space in their respective fields.

In coloumn geometry the energy level fluctuates locally from base line as in a pendulum to produce crest and trough of EM wave in First dimension and orbitums in second dimension. (D.2.7, D.2.8 and D.3.7 : + and – energy fluctuates from base line in coloumn)

The load (mass / momentum) is perceived as an action at one apex bound treo and is reacted at this point by formation of a kinetic coloumn made up of equal number of kinetons.

If some load is kept on each one apex bound treo in wavelength, how will it be reacted by space-matrix? (D.2.5 : Formation of coloumn)

Just below the load at any point after first vibration only 1 bound treo in first layer deforms and changes in one kineton in the time gap of one least time.

For 4 or more free treo load, a second layer is deformed with 3 more kinetons in the second layer (one just below and one on each side) in the time gap of second least time.

Similarly in third layer 5 kinetons (three just below and one on each side) are deformed in third least time after the third vibration.

In the same way 7 kinetons will form in fourth layer and 9 kinetons in fifth layer, 11 kinetons in sixth layer and (2n–1) kinetons in each subsequent n^{th} layer will be deformed in each next least time.

When n=√S, ultimately the biggest sub kinetic coloumn of √S layers (with 2√S–1 kinetons in last layer) made up of total S kinetons is formed in √S vibrations.

n=√S is the limit of first dimensional deformation or formation of EM spectrum as per this model.

(1)Speed of formation of coloumn : Formation of one layer of coloumn with each new vibration is the maximum speed of reaction by space-matrix, which is also the speed of light.

(2) Number of kinetons in sub kinetic coloumns of first dimension :

In a coloumn of two layers which is made up of 4 (2^2) kinetons, there will be one kineton in its first layer and three in the second layer.

In any n^{th} layer there will be 2n–1 kinetons. Any n layered kinetic coloumn thus formed will have n^2 kinetons in total.

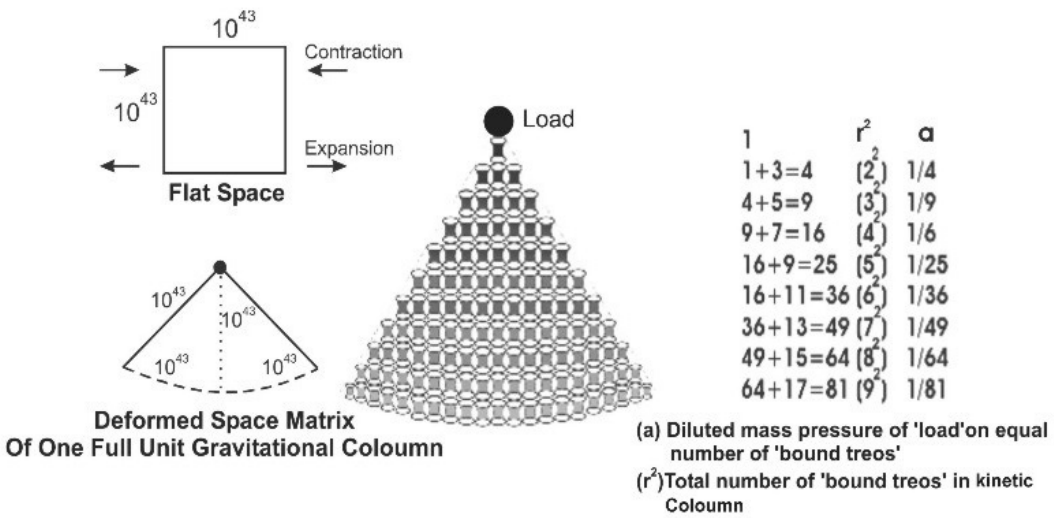
(3) Increasing deformation in first dimension : With each increase of one quanta mass-energy at each next n^{th} quantum level, one new layer having (2n–1) kinetons are added in all sub kinetic coloumn present in decreasing wavelength, and now each n layered kinetic coloumn thus formed has n^2 kinetons in total and will support n^2 free treos load.

For example, when n=9 and n^2=81, load of 81 free treos is supported by equal 81 kinetons in 9 layered kinetic coloumn as shown in the diagram. There are 17 kinetons (2×9 – 1 kinetons) added in the last layer, where each support one free treo load. (D.2.3 : Nine layered coloumn geometry).

(4) Distribution and support of load on coloumn : The total load is supported at one bound treo on apex of a kinetic coloumn, and it spreads or dilutes equally on all kinetons in coloumn upto the layer taken in account (upto any n^{th} layer of the coloumn). Thus any load supported by the coloumn and distributed on its layers is according to inverse square law (the field fades by inverse of the square of distance).

If total load is E at the apex of coloumn, then it is E/4 in second layer on (1 + 3 kinetons 4 in two layers). It is E/9 in third layer (1 + 3 + 5 total 9 kinetons in three layers) and E/16 in fourth layer (1 + 3 + 5 + 7) and E/25 in fifth layer (on 1 + 3 + 5 + 7 kinetons) and so on.

(5) How do coloumns support the load : All kinetons after curtailing its all S planes of vibration start vibrating only in the direction of load , the total force of equal number of all kinetons in kinetic coloumn is directed towards its apex to support the exerted load.



1	r^2	a
1+3=4	(2^2)	1/4
4+5=9	(3^2)	1/9
9+7=16	(4^2)	1/6
16+9=25	(5^2)	1/25
16+11=36	(6^2)	1/36
36+13=49	(7^2)	1/49
49+15=64	(8^2)	1/64
64+17=81	(9^2)	1/81

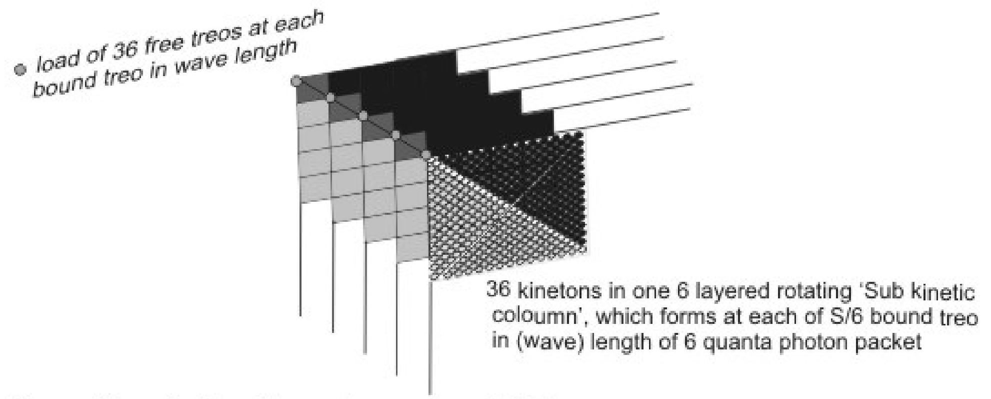
(a) Diluted mass pressure of 'load'on equal number of 'bound treos'

(r^2)Total number of 'bound treos' in kinetic Coloumn

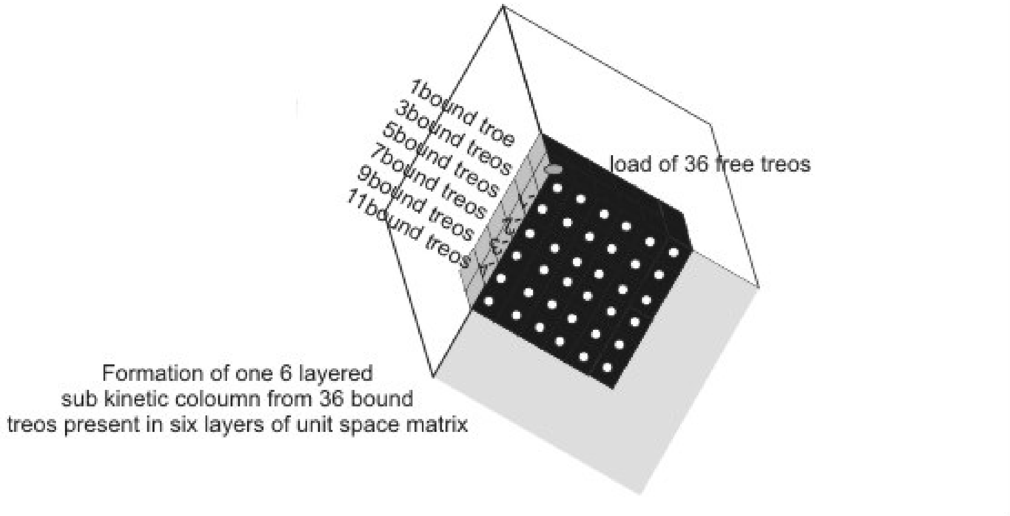
Formation of Nine Layered Kinetic Coloumn

(Diagrammatic Representation)

Diagram 2.3 : 9 Layered Coloumn Geometry


load of 36 free treos at each bound treo in wave length
36 kinetons in one 6 layered rotating 'Sub kinetic coloumn', which forms at each of S/6 bound treo in (wave) length of 6 quanta photon packet

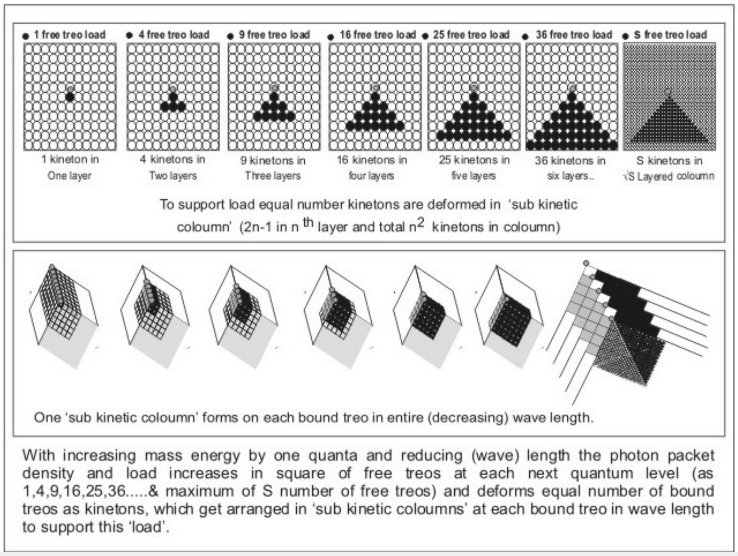
few of sub kinetic coloumns which support the exerted 'load' along entire (wave) length of photon packet


1bound troe
3bound treos
5bound treos
7bound treos
9bound treos
11bound treos
load of 36 free treos
Formation of one 6 layered sub kinetic coloumn from 36 bound treos present in six layers of unit space matrix

Frequency = 6
=number of waves per second
= Number of layers in each 'sub kinetic coloumn'
= 6 Number of quanta in photon packet
Amplitude = 6 layers

2n-1 kinetons in each layer & total (n^2) 36 kinetons i.e.(1+3+5+7+9+11) in 6 layered sub kinetic coloumn of '6 quanta photon packet'

Diagram 2.4 : Formation of 6 layered Coloumn Geometry



To support load equal number kinetons are deformed in 'sub kinetic coloumn' (2n-1 in n th layer and total n^2 kinetons in coloumn)

One 'sub kinetic coloumn' forms on each bound treo in entire (decreasing) wave length.

With increasing mass energy by one quanta and reducing (wave) length the photon packet density and load increases in square of free treos at each next quantum level (as 1,4,9,16,25,36.....& maximum of S number of free treos) and deforms equal number of bound treos as kinetons, which get arranged in 'sub kinetic coloumns' at each bound treo in wave length to support this 'load'.

Diagram 2.5 : Formation of layers of kinetic Coloumn and reduction of (wave) length of photon packet with its increasing mass energy.

all supporting sub kinetic coloumns in one (wave) length of any Photon Packet form one EM wave

Diagram 2.6 : Distribution of mass-energy in Photon

Packet on one RC wave length forming half EM wave.

Mathematical models of string and super string theories predict the loops of strings which are orbitums of the treo model in second dimensional deformation. These can also be visualized as one line having S bound treos changing into a circle by joining its ends.

The series 1, 3, 5, 7.. in first, second, third or fourth layer of any kinetic coloumn i.e. 2n–1 units in each n^{th} layer, decide the number of kinetons in first dimension and orbitums in second dimension (It form 1, 3, 5, 7 orbits in 1st, 2nd, 3rd and 4th sub shell, which are conventionally denoted as s, p, d, f orbits by second azimuthal quantum number). All identical orbitums one over other in wavelength unite to form one orbit.

(B) Angular Radial Deformation

Increasing angular radial deformation of Space-matrix decides changing wave pattern in each dimension.

The angular momentum increases at the rate of one unit per one quantum mass-energy which increase in photon packet at each next quantum level; thus Planck constant *h* is the angular momentum of one quanta mass-energy which calibrates layer by layer deformation of space-matrix in first dimension.

The number of bound treo layers deformed in each sub-kinetic coloumn determine the frequency of EM wave, and therefore number of waves per second increases by integral numbers as angular momentum increases from hv_1, hv_2, hv_3 ... hv_n, *up to* $hv_{\sqrt{c}}$ in EM waves in the deformation of first dimension.

In second dimension the angular momentum increases **by 1/2 h with increase of one unit electron mass-energy at each next quantum level while another half angular momentum is already consumed by anti particle at this quantum level as they are produced by breaking of one EM wave.** In the second dimensional deformation it calibrates the number of orbitums in sub shells deformed to form one bigger shell (in place of sub kinetic coloumn of first dimension) which increases frequency, increasing angular momentum and radius of shell. This decides the increasing speed of orbital motion of body.

In case of Electron black hole [5] in three dimensional deformations, increasing angular momentum decides the increasing number of layers (circles) as n (h_c) in this kinetic coloumn, where n can be 1, 2, 3 up to √S.

While in deformation of four dimensions of space-time in gravitational sphere of bodies, increasing angular momentum represents the increasing surface area of gravitational sphere formed, which is calibrated with the increasing radius of solid angle, as n $(h/4p)^{1/2}$, where n can be 1, 2, 3... up to √S.

The angular momentum of wave increases gradually in all dimensions. In case of first dimensional deformation angle of inclination of all sub kinetic coloumns with the EM wave (and the force of their vectors) increase gradually from 0°- 90^0 from vertical (upwards) to horizontal . In second dimension the inclination of shells with the matter wave increases from 90°– 180° from horizontal to vertical (down wards).

The angular momentum also increases in third dimension and now angle of inclination of all full kinetic / unit gravitational coloumns with the gravitational wave (and the force of their vectors) increase gradually from 180^0 - 270° at each next quantum level of third dimension. While in fourth dimension the inclination of electron black holes gradually changes from horizontal to vertical (again downwards) i.e. 270^0 to 360°

ANGULAR DEFORMATION OF COLOUMNS AT QUANTUM LEVEL

First Dimension [(quantum number / √S) × 90°]

Second Dimension [90° + (quantum number / √S) × 90°]

Third Dimension [180^{0+} (quantum number / √S) × 90°]

Fourth Dimension [270° + (quantum number / √S) × 90°]

Formation of Quantum levels in Coloumns of Each Dimension

There is a general pattern followed in all dimensions.

The biggest kinetic coloumn of each dimension have S units arranged according to coloumn geometry at its **√S quantum levels**.

Full deformation of all previous dimensions serve as one unit at first quantum level of the next dimension.

1unit at first quantum level (full deformation of all previous dimensions), 3 units at second quantum level, 5 units at third quantum level, 7 units at fourth quantum level or (2n–1) units at any n th quantum level. Thus total S units will form √S quantum levels of this coloumn.

These units are, One kineton (**one bound treo**), One orbitum (**S kinetons**), One Graviton with one full kinetic unit gravitational coloumn (**S^2 kinetons**) and One electron black hole (**S^3 kinetons**), **in first, second, third and fourth dimension respectively . At each next quantum level these units are added according to coloumn geometry (2n–1 in n th quantum level) .**

Mass energy in any packet at its quantum level in all dimensions

Unit of increment o+f this dimension × Quantum number at which this mass energy packet is placed.

In case of any cosmic body total number of bound treo layers in its gravitational sphere serve as one unit, such units are added in the radius of gravitational (coloumn) field at each quantum level according to coloumn geometry .

(1) Quantum levels in first dimension

Thus in the formation of one 'sub kinetic coloumn' of first dimensional deformation there will be 1 kineton in first layer which form first quantum level, 3 kinetons are added in second kineton layer forming second quantum level, 5 kinetons are added in third kineton layer which form third quantum level, 7 kinetons are added in fourth kineton layer which form fourth quantum level and at n th quantum level in n th kineton layer it adds 2n–1 kinetons. Thus √S kineton layers (S bound treos) are present at √S quantum levels in one sub kinetic coloumn having S kinetons.

(2) Quantum levels in second dimension

S kinetons (in length) are already deformed in first dimension; now at each quantum level in second dimension 1x S kinetons, 3 × S kinetons, 5 × S kinetons, 7 × S kinetons, or **(2n–1)** × **S** kinetons at each n th quantum level or total **S** × **S** kinetons in S orbitums will form √S quantum levels of coloumn.

1 orbitum in one sub shell forms first quantum level, 3 orbitums in second sub shell adds to form second quantum level, 5 orbitum in third sub shell adds to form third quantum level, 7 orbitum in fourth sub shell adds to form fifth quantum level and 2n–1 orbitums in n th sub shell are added to form n th quantum level. Total S orbitums will contract to form √S quantum levels in 'one full kinetic / unit gravitational coloumn' of second dimension.

(3) Quantum levels in third dimension

In coloumn of Third dimension; As S^2 bound treos (in length and breadth of unit space matrix) are already deformed; now further deformation at each quantum level involving depth of unit space matrix have $1 \times S^2$ kinetons (at one graviton), $3 \times S^2$ kinetons, $5 \times S^2$ kinetons, $7 \times S^2$ kinetons or $(2n–1) \times S^2$ kinetons are added at each n th quantum level or total $S \times S^2$ kinetons will form √S quantum levels of coloumn.

Thus at first quantum level 1 graviton is in first spiral circular layer, 3 gravitons in second spiral circular layer are added to form second quantum level, 5 graviton in third spiral circular layer are added to form third quantum level, 7 gravitons in fourth spiral circular layer are added to form fourth quantum level and at n th quantum level 2n–1 gravitons in n th spiral circular layer form n th quantum level. Total S gravitons will form √S quantum levels in √S spiral circular layers of **'one electron black hole'** which is the coloumn of third dimension.

(4) Quantum levels in fourth dimension of Space- Time

S^3 kinetons are deformed by complete deformation of third dimension (by complete deformation of one unit space matrix in length, breadth and depth). Unit of electron black hole or S^3 kinetons are added as per coloumn geometry in fourth dimensional deformation. Thus**√S bound treo layers in radius of gravitational sphere are added at each quantum level as each electron black hole is made up of √S bound treo layers .**

Kinetic energy of 1 × S^3 kinetons at first quantum level, 3 × S^3 kinetons at second quantum level, 5 × S^3 kinetons at third quantum level, 7 × S^3 kinetons at fourth quantum level, or (2n–1) × S^3 kinetons at each n th quantum level are added. It totals S × S^3 kinetons at √S quantum levels in kinetic coloumn and have S number of bound treo layers (√S bound treo layers × √S quantum levels).

Thus at first quantum level 1 electron black hole (S^3 kinetons) is present in the gravitational coloumn of fourth dimension, at second quantum level 3 electron black holes are added, at third quantum level 5 electron black holes, at fourth quantum level 7 electron black holes and at any n th quantum level 2n–1 electron black holes are added. Total S bound treo layers (√S bound treo layers at each quantum level × √S quantum levels) are involved to form √S quantum levels of **gravitational sphere or one unit black hole which is the coloumn of fourth dimension**. Thus finally 2S –1 gravitons are in one line at periphery of gravitational sphere. (√S gravitons in last spiral circular layer in each of 2√S –1 electron black holes present at last √S th quantum level).

Multiple unit space matrices can not deform (contract) in undeformed space matrix without breaking the flow of space-time . In the formation of gravitational sphere along with the deformation (contraction) of multiple unit space matrices the **time also slows down** by curtailing of vibrations of all bound treos in each bound treo layer of gravitational sphere @ one vibration per bound treo layer per second from its periphery towards its center, resulting in no vibration of the bound treo at its gravitational center of unit black hole.

Formation of gravitational field of Sun and its quantum levels

10^{17}quantum levels are in gravitational sphere of Sun -

As √S bound treo layers (or 4.03×10^{21} bound treo layers) are added at each next quantum level in gravitational sphere of any cosmic body. Thus In case of 10^{38} unit mass body of Sun there are 10^{38} bound treo layers in its gravitational sphere and has 10^{17}quantum levels. This gravitational sphere of Sun has total $(10^{38})^{2}$ gravitons, which support $(10^{38})^2$ unit masses load of sun at its gravitational center. These gravitons are present in 10^{34} electron black holes which are placed at 10^{17} quantum levels to constitute gravitational sphere of Sun.

On the surface of gravitational sphere of Sun at last 10^{17} th quantum level it has total 2x 10^{38} –1 gravitons (2×10^{17} –1 electron black holes at last quantum level × 10^{21} gravitons on each side of gravitational center of Sun in last layer of each electron black hole). This is reduced Compton wave length and when multiplied by 2 π it determines the Compton wave length of gravitational wave of gravitational sphere of sun at last quantum level.

In case of any cosmic body total number of bound treo layers in its gravitational sphere serve as one unit, such units are added in the radius of gravitational (coloumn) field at each quantum level according to coloumn geometry.

Matter waves at each quantum level in second dimension of 2×10^{38} –1 full kinetic /unit gravitational coloumns at the surface of gravitational sphere join to form gravitational field of Sun (as one such coloumn is present at each graviton in outer most layer of gravitational sphere of Sun).

1 layered first matter wave of all these 2×10^{38} –1 full kinetic unit gravitational coloumns join to form 1 st quantum level of 1x 10^{38} bound treo layers in gravitational field of Sun. 3 layered second matter wave of all 2x 10^{38} full kinetic unit gravitational coloumns jointly increases the

radius of gravitational field by 3 × (10^{38}) bound treo layers and form second quantum level. At third quantum level 5 layered matter wave adds 5 × (10^{38}) bound treos layers in radius, at fourth quantum level 7 (10^{38}) bound treo layers are added in radius or (2n–1) × 10^{38} bound treo layers are added in radius at any n th quantum level. **Thus total n^2 × 10^{38} bound treo layers are present upto any n th quantum level.**

Extent of gravitational field of Sun -

Thus total $(10^{17})^2 \times 10^{38}$ bound treo layers (10^{72} bound treo layers) are present upto last 10^{17} quantum level of gravitational (coloumn) field of Sun according to formula **(square of quantum level × number of bound treo layers in gravitational sphere of Sun). The same formula applies to gravitational fields of any cosmic body.**

Quantum levels of planetary orbits -

All the Planetary bodies are placed in ten quantum levels between 10^4 th and 10^5 **th quantum level** of gravitational (field) coloumn of Sun. This 10^4 th quantum level is present at 10^{46} bound treo distance away from gravitational center of Sun (radius of mercury orbit) according to above formula [$10^{46} =(10^4)^2 x10^{38}$].

Evidences in favor of Coloumn geometry

As per the treo model it is the space-matrix which reacts. We know that EM forces can not be generated without a photon, atomic forces can not be generated without an atom and gravitational forces can not be generated without mass of a body. Thus we can say a photon, atom or a mass of a body produces an action on the space-matrix to which the space-matrix reacts and generates these forces by formation of kinetic coloumns which follow proposed coloumn geometry in each dimension.

(1) The gravitational force, intensity of light, charge density and the magnetic field, all follow the inverse square law which indicates the proposed coloumn geometry.

(2) There are direct proofs that the distribution of electrons in electron orbits of an atom, at each quantum level (in *1s, 3p, 5d, 7f* orbits formed in sub shells of shell, forming atomic structure), is also according to this geometry of proposed kinetic coloumn.

(3) This coloumn geometry is seen in the formation of gravitational field of a body and Newton's gravitational field equations [6] (MG = r^2a and MG = rv^2) are in accordance with the coloumn geometry.

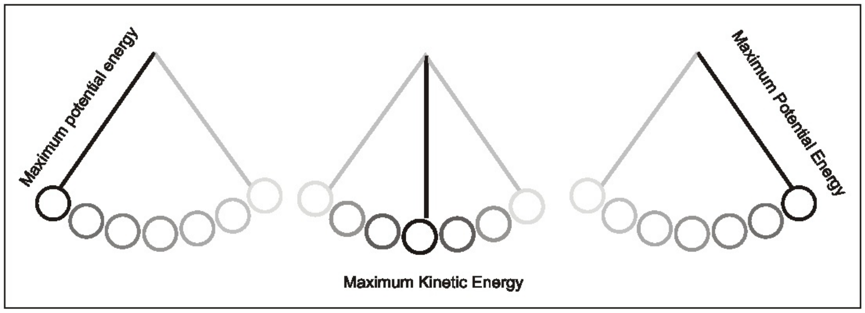
Any free moving baby body will accelerate ($a = MG / r^2$) in gravitational field of its parent body and will form an ellipse. Thus motion of all planets are in elliptical orbits as they move in their orbits in solar gravitational (field) coloumn.

All elementary particles i.e. electron & nucleons etc. and all planets and satellites revolute in its orbit [by 'v' number of bound treos distance per second] after being pushed by nuclear or gravitational kinetic energy [v^2 in gravitational field of Sun ($v^2 = MG / r$)] according to this coloumn geometry, which when measured in term of 'number of bound treo distance traveled per second by body' is equal to total bound treo layers in one shell (forming its all sub shells) i.e. frequency of matter wave at this quantum level. (as you will see in this model that planet orbits are formed by fusion of matter waves of second dimension at identical quantum levels)

(4) In gravitational coloumn of any cosmic body its baby bodies are

placed at ten quantum levels between 10^4th to 10^5th quantum level of parent body (e.g. satellites of outer planets, planets of solar system and stars in a galaxy), the position of these baby bodies and their speed of revolution verifies the proposed geometry of deformation of space-matrix and proposed model.

(5) Schrödinger's equations for motion of a linear harmonic oscillator [7] i.e. Any moving load produces ripples in the deformed space-matrix at distance of 1, 3, 5, 7, 9, 11 units, is in accordance with the proposed coloumn geometry and it is also calculated by Schrödinger's equations for motion of a linear harmonic oscillator. These equations describe the formation of orbits and atomic structure which is again based on proposed coloumn geometry.



In our 'Pendulum quantum universe' in one dimensional deformation of space matrix, it swings the potential energy and kinetic energy of all bound treos in its wave length of an photon packet (as one dimensional clock pendulum) to form EM wave.

Diagram 2.7 : Fluctuation of potential energy and kinetic energy in one dimensional (clock) pendulum.

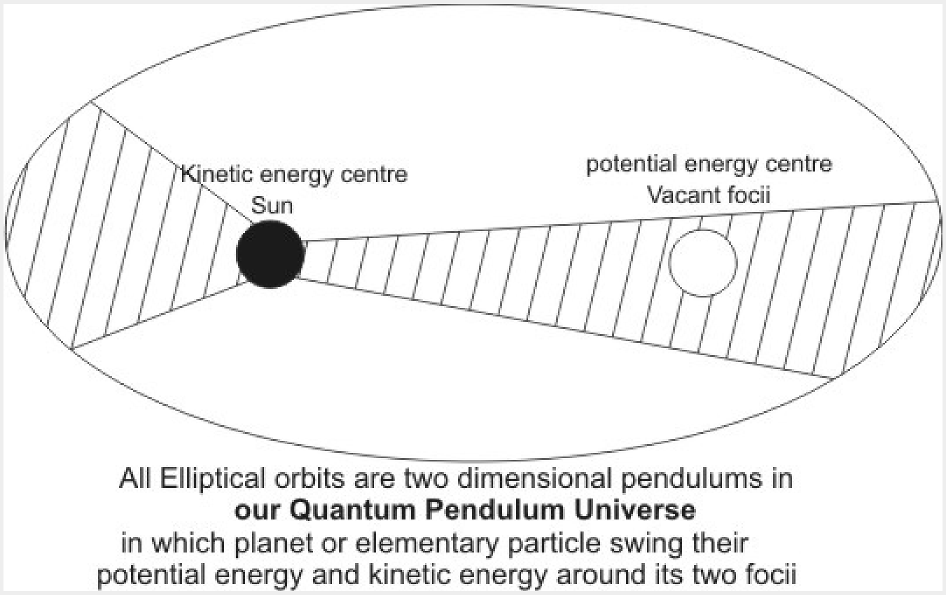

Kinetic energy centre
Sun
potential energy centre
Vacant focii
All Elliptical orbits are two dimensional pendulums in
our Quantum Pendulum Universe
in which planet or elementary particle swing their
potential energy and kinetic energy around its two focii

Diagram 2.8 : Orbits are pendulums in two dimensions

The orbits (electron orbit or planetary orbits) **can be visualized as two dimensional surfaces on which point mass of body moves and behaves as pendulums** in which the orbiting electron or planet fluctuates its kinetic and potential energies, with each complete revolution in its orbit. There are two foci in an ellipse. When a point mass of body (electron, elementary particle, planet, star etc) moves towards a kinetic energy foci (of parent body e.g. Sun as one kinetic energy foci in case of planetary orbit) in its elliptical orbit it increases its kinetic energy and moves fast (by having more then ground energy in kinetic coloumn forming gravitational field in proximity of Sun) and when it moves towards potential energy foci (or vacant foci away from Sun) it increases its potential energy (due to less then ground energy in kinetic coloumn) and the body moves slow in orbit. By one revolution of body in its orbit it completes one full oscillation of this pendulum but the total load of body remains same and is supported by equal number of bound treos(kinetons) in one unit Time, Dig 2.8 orbits. An imaginary line drawn from the center of the Sun to the center of the planet will sweep out equal areas in equal intervals of time. (The Kepler's Law of Equal Areas [8]).

Wavelength and frequency

Number of quanta mass energy in photon packet or in elementary particle packet or mass pressure of body will decide the quantum level of one full kinetic coloumn/ unit gravitational coloumn on which it will spread and will form one wave. The mass energy (or mass pressure of body) spreads and occupies half length of layer at this quantum level (which is its reduced Compton wave length). One oscillation in pendulum motion of this mass energy with time, will produce one wave involving one full layer i.e. 2 × reduced Compton wave length.

General understanding of wave length and frequency as explained by treo model,

Reduced Compton (RC) wave length (equal to radius of circle, or half the length of layer at this quantum level of one full kinetic / unit gravitational coloumn) = Number of apex bound treos on which the packet will spread its mass energy or body will exert its mass pressure = Total number of sub-kinetic coloumns which form on these apex bound treos to support the mass-energy or mass pressure at any given time.

One layer of full kinetic / unit gravitational coloumn, at which one wave forms, (equal to arc which occupies 1/3 rd circumference of circle) = 2 × Reduced Compton wave length = number of apex bound treos on which one wave forms = One layer of one full kinetic/ unit gravitational coloumn at this quantum level.

Compton wave length (Circumference of circle) = Reduced Compton wave length × 2 π = number of bound treos in circumference of orbit, on which the point mass of elementary particle revolutes with time and forms integral number of waves.

Frequency = Total number of bound treo layers in any one sub kinetic coloumn or in one shell (placed at any one apex bound treo) or in coloumn with its apex at gravitational center of body.

WAVELENGTH

(A) Decreasing wavelength in First dimension and Second dimension

Conventional formula of wavelength is as follows: [9]

For EM waves it is Wavelength λ = velocity / frequency. For matter waves it is $\lambda = h / (mv)$

Mass-energy increases in unit of one quantum (or S free treos which is mass energy in one unit photon packet) at each of √S quantum levels in first dimension and in unit of √S quanta (Mass energy of one unit electron packet) at each of √S quantum levels in second dimension. The waves at all quantum levels in first and second dimensions jointly form one full kinetic / unit gravitational coloumn. (D.2.9 : Details).

In First dimension for all photon packets the RC wavelength decreases from S bound treos length for unit photon to √S bound treos length for gamma photon; with increasing frequency from one to √S.

In second dimension RC wavelength further reduces from √S bound treos length for unit electron to one bound treo length for unit mass; with increasing frequency from √S to S.

Due to increasing mass energy and reducing wavelength (along with contraction of mass-energy packets in length), at each next n th quantum level, the load increases in square of free treo square (n^2 free treos) in first dimension and in square of quanta (n^2 quanta) in second dimension.

Reduced Compton wave length (equal to radius of circle, or half the length of layer at this quantum level of one full kinetic / unit gravitational coloumn) = S bound treos / number of quanta mass energy in packet.

or Reduced Compton Wavelength at any quantum level in first or in second dimension = Reduced Compton wavelength at first quantum level of this dimension / number of quantum level at which it is being calculated.

Then Compton wavelength at this quantum level = Reduced Compton wavelength × 2 π

load or mass pressure at each one apex bound treo in RC wavelength in first and second dimension = Mass / Wavelength.

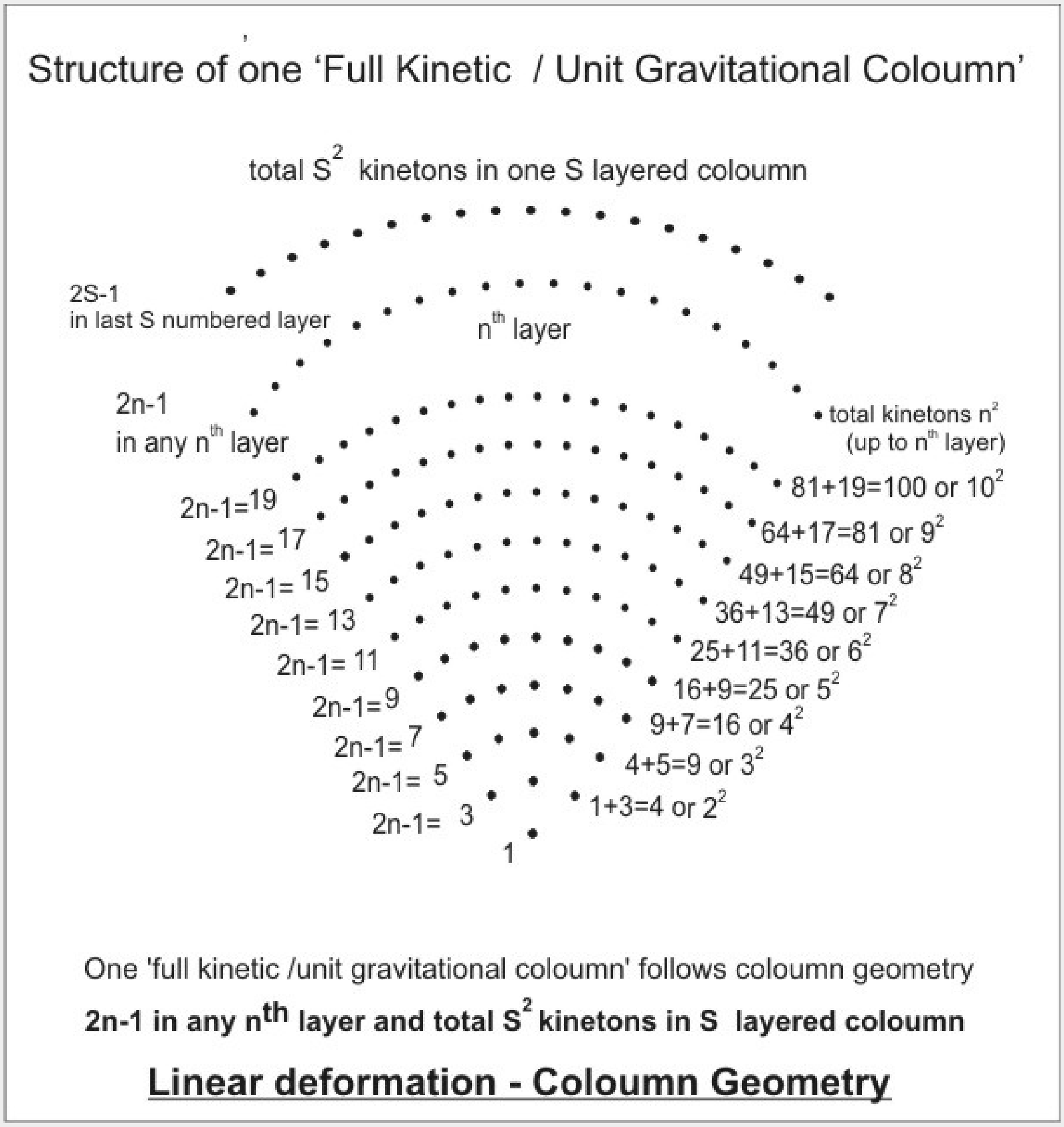


Diagram 2.9 : Wavelength or spread of photons and elementary particles at quantum levels of one Full Kinetic / Unit Gravitational Coloumn (on one bound treo layer of coloumn, which is identified as S / number of quanta in packet)

This process of contraction of increased mass-energy in packets on their reducing wavelengths continues both in first and second dimension till S quanta mass-energy of unit mass contracts on just one bound treo (S bound treos / S quanta in packet) which is wavelength of unit mass. Finally one unit mass (S quanta mass-energy or S^2 free treos or Planck's mass or 2.16×10^{-8} Kg) is supported at one graviton (one apex bound treo or unit gravitational center of unit mass) by its one full kinetic / unit gravitational coloumn which have √S quantum levels of first dimension from S lines, and √S quantum levels of second dimension from S sheets of unit space matrix. (pages).

To support above statements we will study the conventional value of wavelength in terms of bound treo length.

(1) Reduced Compton wavelength of Electron (this is also quantum radius of electron, R_q) [10]

= $0.38600391 \times 10^{-12}$ m (conventional value) = 23.88951×10^{21} Bound treo distance

This can also be calculated by proposed formula - S bound treo / √S quanta in unit electron packet

($1.855394405 \times 10^{43}$ bound treo distance / $0.77407003 \times 10^{21}$ or approx √S quanta) = 23.9693×10^{21} bound treo distance

(2) Compton wavelength of electron

= $2.4263102389 \times 10^{-12}$ m (conventional value) =1.5016263×10^{23} bound treo distance.

(3) Relation of Reduced Compton wave length and Compton wave length

(Reduced Compton wavelength × 2 π = Compton wave length)

23.88951×10^{21} Bound treo distance × 2 π = 1.5016263×10^{23} bound treo distance

(4) Reduced Compton wavelength × mass-energy of electron = S^2

All matter wave at any quantum level of one full kinetic / unit gravitational coloumn at second dimension support the diluted mass pressure of unit mass.[11]

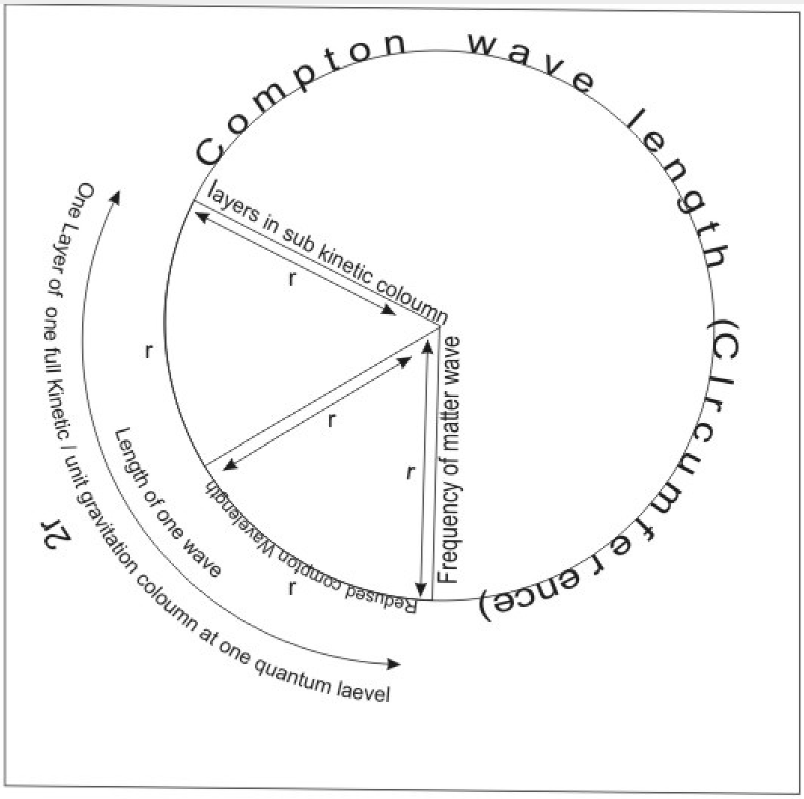
23.88951×10^{21} Bound treo distance × 1.440589×10^{64} free treos mass energy of unit electron = $3.441937358 \times 10^{86} = S^2$ which is ground energy of second dimension.

Thus, to conclude;

(1) Reduced Compton wavelength is radius of circle or height of kinetic coloumn on which mass energy of any elementary particle packet spreads.

(2) 2 × Reduced Compton wavelength = bound treos in the layer of one full kinetic / unit gravitational coloumn, on which one matter wave forms at this quantum level, involving 1/3 rd arc of a circle.

(3) Compton wavelength = 2 π × Reduced Compton wavelength = circumference of this circle = angular momentum of wave.


Compton wave length (Circumference)
layers in sub kinetic coloumn
r
r
r
r
r
Frequency of matter wave
Redused compton Wavelength
Length of one wave
One Layer of one full Kinetic / unit gravitation coloumn at one quantum laevel
2r

Frequency = **Radius of circle** = total number of layers which increases in multiple of √S number of bound treo layers at each next quantum level
= total number of quanta mass energy of elementary particle
= orbital speed in orbit at this quantum level

Reduced Compton wave length = S / number of quanta in elementary particle
One layer of full kinetic unit gravitational coloumn = 2xRC wave length=One EM or Matter wave

Compton wave length = (circumference of circle) = Reduced Compton wave length (r) x 2 (Π)

First quantum level has a shell containing one sub-shell, Freq = √S, Wavelength = S/√S = √S

Second quantum level has a shell containing two sub-shells, Freq = 2√S, Wavelength = S/(2√S) = √S/2

Lastly at the √S quantum level, there is a shell containing √S sub-shells and now a graviton is formed, Freq = √S.√S = S, Wavelength = S/(√S.√S) = 1

Dig 2.10 **Increasing Frequency at each quantum level in second dimension**

(B) Increasing wavelength in third dimension and fourth dimension

One unit mass is the maximum limit of load which can be supported at one point by one graviton (or miniscule black hole) on space-matrix in universe. One unit mass energy is the unit which increases in deformation of third dimension at each of √S quantum levels.

Bodies made up of multiple unit masses exerts its mass pressure on space matrix in length, breadth and depth in third dimensional deformation, which is supported from increasing number of planes by addition of one new circular spiral layer at each next quantum level with addition of 2n–1 gravitons at any n th quantum level.

Kinetic coloumn of third dimension which is Electron black hole, have 1, 3, 5, 7 gravitons (i.e. 2n–1 gravitons in n th layer, at n th quantum level) ...... and 2√S –1 gravitons are in √S th circular spiral layer of electron black hole at last √S quantum level.

The wavelength of gravitational wave increases from one apex bound treo or one graviton in first layer to 2√S–1 gravitons in last spiral circular layer of one electron black hole (and 2n–1 gravitons in any n th layer at n th quantum level).

Still bigger cosmic bodies of multiple unit masses exert their mass pressure on space matrix from all planes and all directions in fourth dimension. The total ‘load’ experienced at the gravitational center of gravitational sphere is equal to the square of the number of unit masses in body.

The mass increases by √S unit masses (approx 10^{13} Kg) at each next quantum level in fourth dimension and its 'load' increases at its gravitational center by square of number of unit masses in body.

2n–1 electron black holes are in one layer at any n th quantum level and at √S quantum levels in fourth dimension there are total S electron black holes and S^2 number of gravitons.

The wavelength further increases from 2√S –1 bound treos to 2S–1 at last √S th quantum level in gravitational sphere of this fourth dimensional deformation.

To direct the vectors (force) of all S^2 gravitons present in all layers of gravitational sphere simultaneously (and to maintain the structure of kinetic coloumn) towards the gravitational center at any instance, these bound treo layers in gravitational sphere should rotate at different speed in each layer. To do so the time slows down by curtailing one vibration per second of all bound treos in each layer from periphery towards its center. In one S bound treo layered gravitational sphere of unit black hole the bound treo at the gravitational center will not vibrate and time will stop here. Such non vibrating gravitational center of unit black hole is named as gravitational singularity. It is well known by general theory of relativity that time also slows down in gravitational field with its increasing 'gravitational field strength' towards the cosmic body.

Wavelength at each quantum level in gravitational field -

The gravitational coloumn of any n unit mass cosmic body in gravitational sphere further extends towards periphery, with the union of its 2n–1 full kinetic unit gravitational coloumns to form its gravitational field.

2n–1 apex bound treos in wave length with 2n–1 supporting sub kinetic coloumns form one wave in any n th layer at n th quantum level of gravitational (coloumn) field, which have total 2MG kinetic energy. i.e 2MG = 2n–1 sub kinetic coloumns × v^2 kinetic energy of each sub kinetic coloumn.

The distance from gravitational center of any body upto any quantum level in its gravitational field (in terms of bound treo layers) = square of quantum level number × number of bound treo layers in gravitational sphere of cosmic body.

The gravitational coloumn sun in its gravitational sphere further extends towards periphery, with the union of $2 \times 10^{38} -1$ full kinetic unit gravitational coloumns which form its gravitational field.

In case of Sun (a 10^{38} unit masses body with 10^{38} bound treo layers in its gravitational sphere) in its gravitational field at first quantum level there are 1×10^{38} bound treo layers, 3×10^{38} bound treo layers are added at second quentum level, 5×10^{38} bound treo layers at third quantum level, and $2n-1 \times 10^{38}$ bound treo layers at any n th quantum level are added .

The orbits of all solar planets are formed by combination of $2 \times 10^{38} -1$ Compton wavelengths of matter waves at their respective quantum level in all $2 \times 10^{38} -1$ full kinetic unit gravitational coloumns.

In general;

Number of quanta mass energy in photon or elementary particle packet or unit masses in body = frequency of wave in this dimension = number of bound treo layers in kinetic coloumn of this dimension.

Conventionally frequency of EM sine wave = (velocity divided by wavelength)

Frequency of matter wave is calculated (as mc^2/h, but if m or rest mass is one unit mass, then it is c^2/h)

FREQUENCY

(1) Frequency of waves in first and second dimension

It can be further elaborated in first dimension

Reduced Planck's constant (ħ) is the value of one quantum mass-energy. The angular momentum of this one quanta mass-energy is the value of Planck constant (h); it is unit action which produces layer by layer deformed in each sub kinetic coloumn with each increase of one quanta mass energy in photon packet.

Frequency of EM waves = S / wavelength = Number of quanta mass-energy in packet = number of bound treo layers in each sub kinetic coloumn = Angular momentum of photon = Number of EM waves which form per second

The mass energy increases at each next quantum level by one quanta (in one unit photon) in first dimension. It deforms one more layer (and frequency increases by one) at each next quantum level in all sub kinetic coloumns of first dimension. Thus frequency increases from one to √S at √S quantum level in first dimension.

Frequency can be elaborated in second dimension

The mass energy increases at each next quantum level by √S quanta (in one unit electron) in second dimension. It increases √S bound treo layers at each quantum level in shells of second dimension and frequency by √S number. Thus frequency increases from √S to S (√S x √S) at √S quantum levels in second dimension.

Frequency of elementary particles = S / wavelength = Number of quanta mass energy in packet = number of bound treo layers which form all sub shells in each shell = number of orbitums in all sub shells of all shells in wavelength = number of bound treo distance the elementary particle revolve in its orbit in one second.

(2) Frequency in third and fourth dimension

Frequency = Number of bound treo layers in one kinetic coloumn which increases one by one at each quantum level in third dimension and by √S bound treo layers at each quantum level in fourth dimension.

The mass energy increases at each next quantum level by one unit mass in third dimension. It deforms one more layer (and frequency by one number) at each next quantum level in all kinetic coloumns of third dimension. Thus frequency increases from 1 at first quantum level to √S at √S quantum level in third dimension.

The mass energy increases at each next quantum level by √S unit masses (supported by one unit electron black hole) in fourth dimension. It increases √S bound treo layers (and frequency by √S number) in gravitational sphere of fourth dimension. Thus frequency increases from √S at first quantum level to S at √S quantum level in fourth dimension.

Concept of load in each dimension and reaction by Space-matrix

Following description summarizes how different loads carve the geometry of deformation of space-matrix in increasing number of dimensions.

Load is exerted by free treos which condenses in units of one quantum in different numbers to form mass energy of all photons and elementary particles. Equal number of bound treos which now vibrate only in the direction of load neutralizes this load and are now named as Kinetons.

The moving packet spreads in one line (reduced Compton wave length) on space matrix and exerts its load i.e. ‘ uniform packet density in terms of number of free treos on each apex bound treo in wave length’ in first or second dimension. While all unit masses in a stationary body exert their load at one point i.e. ‘mass pressure of body at its gravitational center’ in third and fourth dimensional deformation. To support these increasing loads at each apex bound treo of the wave length or at gravitational center of all bodies a kinetic coloumn forms.

(A) Load in first and second dimension -

Mass energy packet of all photons and elementary particles spreads in a line on space matrix and exerts equal load on each apex bound treos present in its RC wave length.

With increasing mass energy in packet it contracts in length on progressively reducing RC wave length (RC wave length of packet = S bound treo / number of quanta mass energy in packet). Finally the RC wave length of 'S quanta mass energy of one unit mass’ becomes one bound treo at ‘one unit gravitational center’ which is now named as one Graviton.

Load of each one free treo in packet is supported/ neutralized for the duration of one Planck least time by the force of one vibration of one kineton. As in moving packets the load shifts continuously from one apex bound treos to next apex bound treo per vibration then load per vibration in first and second dimension can be calculated according to formula;

Mass energy of body in any packet.= LOAD on each apex bound treo × It's Reduced Compton wave length.

or Load on each apex bound treo = Mass energy in body / reduced Compton wavelength (on which this packet spreads)

But Reduced Compton wave length is also = S / frequency (where S = 1. 8554 × 10^{43})

therefore LOAD = mass energy in packet × frequency / S.

To support each one quanta mass energy (S free treos) for one second, one EM wave in first dimension and one orbitum of S kineton is formed in second dimension. Thus to calculate total load of stationary body which is exerted on S apex bound treos in S planes and in turn is supported by S vibrations (for one second) of S bound treos from S planes.

In case of mass energy of photon it shifts from one apex bound treo to next apex bound treo in one least time, by each vibration and thus moves at the speed of light, but the mass energy of all elementary particles remains stationary while being supported on one apex bound treo for some time (for n least times, in which n vibrations occur and vibrate all n shells one by one present in its n wave length of its matter wave) and then this 'point mass of elementary particle' (or stars, planets, satellites any cosmic body orbiting in matter wave of second dimension) is shifted to next bound treo; and thus determines the revolution velocity of this body in its orbit.

(B) Load in third and fourth dimension at its gravitational center -

One unit mass is maximum load which can be supported at one graviton, at one point on space matrix. The mass pressure of 'multiple unit mass body' on multiple gravitons in case of a stationary body is exerted at its gravitational center from multiple planes and from all directions. The body is stationary because its gravitational center is pinned down and at the same time supported continuously. The continuous support of stationary body at a point, is support of its gravitational center by ongoing S vibrations per second (i.e. for the duration of one Planck least time by the force of one vibration) of equal number of supporting kinetons in kinetic coloumn directing its force towards this gravitational center.

In third and fourth dimension the Mass pressure of body is exerted on space matrix in all the S planes (forming a pit) and in turn this total Load of body is to be supported from all S directions = S × number of unit masses in body × frequency / S

Load = Number of unit masses in body × Frequency

Load = Square number of Unit masses in Body

Thus, load at gravitational center in third dimension (and in fourth dimension as well) = Square of unit masses in body = Mass × Number of bound treo layers in coloumn = Mass × frequency

In the formation of any kinetic coloumn, in increasing number of 2n–1 planes in one direction 2MG load of M unit mass body is supported at each quantum level by 2n–1 apex bound treos in its 2 × Reduced Compton wave length (on which M unit masses of this body form one wave), and total M^2 load of gravitational center is supported on its Compton wave length (in one circle) continuously means by S vibrations for one second.

The ‘load’ at its gravitational center which was supported by four dimensional kinetic coloumn in gravitational sphere, dilutes as ‘a’ or diluted mass pressure in its gravitational field (a = MG/ r2) on three dimensional, two dimensional and then in one dimensional deformation, till it becomes one free treo load per kineton in last bound treo layer at periphery of gravitational field of this body.

(C) Reaction of space matrix with increasing loads and changing geometry of its deformation in all four dimensions

The geometry of deformation of space matrix is Coloumn geometry, which describes the linear deformation pattern of space-matrix in each dimension, where 2n–1 units in its each n^{th} layer (where n is any integral number which specifies its quantum level) and total n^2 units are present in a n layered kinetic coloumn, based on the summation $1 + 3 + 5... + (2n–1) = n^2$

(1) Geometry of 1st dimensional deformation for load at any one apex bound treo in wave length, (for one kineton to S kinetons or one quantum mass energy)

(Linear deformation pattern form transverse EM waves)

One quantum mass-energy or one unit photon mass energy - One quantum mass-energy consists of S number of free treos (1.855×10^{43} free treos) which is added one by one at each of √S quantum levels to form all √S type of photon packets of EM spectrum.

Load in first dimension at each apex bound treo in wave length = Number of quanta mass energy in photon packet / wavelength.

= mass energy in packet × frequency / S.

Sub-kinetic coloumn - On each apex bound treo of RC wavelength (length of spread of photon packet) one sub kinetic coloumn is formed to support its load.

Layers of sub-kinetic coloumn - One kineton layer is added in all sub kinetic coloumns at each next quantum level.

Kineton - One bound treo of space-matrix which curtails its planes of vibration and vibrate only in the plane of load; also named as one deformed bound treo or one kineton.

With increasing mass energy at each quantum level and reducing wave length of packet , the load increases by square of free treos. To support this Increasing load 1, 3, 5, 7 and so on ..... or 2n–1 kinetons (where n is quantum level) are added, in 1st, 2nd,3rd, 4th kineton layer upto 2√S–1 kinetons in √S th kineton layer of last $\surd S^{th}$ quantum level in each sub-kinetic coloumn. Thus biggest sub-kinetic coloumn of √S layers has a total of $(\surd S)^2$ or S number of kinetons, which represents (S alphabets in one full line of one page of book) of unit space matrix.(D.2.6)

(2) Geometry of 2^{nd} dimensional deformation for load at any one apex bound treo in wave length (for loads of one quanta to S quanta of one unit mass)

(Circular deformation pattern of orbitums which together form one electron orbits)

One unit electron mass - One unit electron mass is composed of √S quanta mass-energy which is added (as one unit) in the packet of elementary particle to shift it at next higher quantum level. This process is repeated at √S quantum levels to form kinetic coloumn of second dimension.

[This increases of mass energy is on much bigger scale in comparison to first dimensional deformation where the mass energy was increasing in units of 1 quanta per quantum level. The full deformation of first dimension (one line of S alphabets) serve as one unit of second dimensional deformation].

Load in second dimension at each apex bound treo = Mass energy in elementary particle / wavelength = mass energy in packet × frequency / S.

Sub kinetic coloumn, layers in sub kinetic coloumn and kinetons of first dimension is replaced by Shell, sub shells and orbitum in second dimension as per changing geometry of deformation and requirement.

Shell - One shell forms around each apex bound treo in wavelength of any elementary particle packet. When each sub-kinetic coloumn of first dimensional deformation rotates by 360 degree at its apex bound treo it forms one shell of second dimensional deformation.

Sub-shell - All sub-shells at each of apex bound treo of the wavelength are concentric, and it is equivalent to a layer of sub-kinetic coloumn of first dimension. With increase of one unit electron mass energy at each successive quantum level, one sub-shell increases in each shell of second dimension. Finally their are √S sub-shells in one shell, at √S quantum level.

Orbitum - One orbitum is formed by rotation of biggest sub kinetic coloumn which have √S layers and S kinetons. It can be understood as S bound treos in one line, which forms one circle by joining its ends, and now named as one orbitum. One orbitum supports one quanta load (S free treos) by its one rotation in one second.

For a unit electron at first quantum level, there is one orbitum per apex bound treo (in one shell) in the wavelength to support its one quanta load. With increasing mass energy and reducing wavelength the load increases by square of quanta. As this increased load is to be supported by kinetic coloumn, it adds (2n–1) 1,3, 5, 7 and so on ....up to 2√S–1 orbitums in 1 st , 2 nd, 3 rd , 4 th.......√S th sub-shell respectively. Thus for S quanta mass energy in one unit mass or S^2 free treos, one full kinetic / unit gravitational coloumn having S^2 kinetons in S orbitums form.

It can be understood that at last quantum level one full page of one cuboid book is deformed.

Graviton - One Graviton is formed to support the load of exactly one unit mass or S^2 free treos. This graviton comes into existence because of the action of load of one unit mass or S^2 free treos at its gravitational center, to which space matrix reacts by directing all the vectors of S^2 kinetons (in total S orbitums of one full kinetic / unit gravitational coloumn), towards one apex bound treo in wave length. (D.2.9).

(3) Geometry of 3 rd dimensional deformation for the load at one gravitational center, (of one unit mass to S unit mass load of one electron black hole)

Deformation of all sheets (pages) of one unit space matrix, which wrap as 2n–1 sheets at each n th quantum level

Increment of one Unit mass -

One unit mass energy increases in a body and it is now supported at next higher quantum level. The load increases by square of unit masses at gravitational center and each unit mass load is supported by one graviton in increasing gravitational coloumn of third dimension.

load at gravitational center of body = number of unit masses in body × frequency at this quantum level = Square of unit masses in body

Electron black hole - Electron black hole is one full kinetic coloumn of third dimension, made up of S number of gravitons arranged in concentric √S spiral circular layers which support S unit masses load of ‘one √S unit mass body’

Layers of electron black holes - At each next quantum level the increasing mass pressure (load which increases in square of unit masses of quantum level) of increasing unit masses in body in increasing planes around its gravitational center is to be supported from increasing number of planes in third dimension. To support this increasing load one concentric spiral circular layer having 2n–1 gravitons in increasing number of planes is added at each n th quantum level.

Gravitons To support the increasing load in square of unit masses in body, 2n–1 gravitons are added in each new spiral circular layer. Thus it adds 1, 3, 5, 7 and so on .... (or 2n–1 gravitons) in 1st, 2nd, 3rd, 4th ... (n^{th} circular layer) of the electron black hole. Upto 2√S–1 gravitons are added in last $\sqrt{S}^{th}$ circular layer of electron black hole at last √S quantum level. (each successive circular layer engulf the inner layer in a conical pattern).

(4) Geometry of 4 th dimensional deformation for load at one gravitational center, (of S unit mass to S^2 unit mass load, in gravitational spheres of cosmic bodies)

(can be understood as deformation of multiple unit space matrices or multiple cuboid books with the contraction of fourth dimension of Time)

Load in fourth dimension at its gravitational center = number of unit masses in body × frequency at this quantum level

= Square of unit masses in body

The supporting kinetic coloumn of the fourth dimension is called a gravitational sphere made up of concentric rows of electron black holes where each electron black hole have S gravitons in its $\sqrt{S}$ bound treo spiral circular layers.

Gravitational spheres of cosmic body and unit black hole -

To support any ‘n unit mass smaller cosmic body’ i.e sun , earth , moon etc. and its load of n^2 unit masses at its gravitational center, n^2 gravitons are formed in n number of electron black holes in n bound treo layered gravitational sphere. Biggest gravitational sphere formed for S unit mass body which exert its load of S^2 unit masses at its gravitational center, is supported by S^2 gravitons which are present in S number of electron black holes, in S bound treo layered gravitational sphere. This structure is unit black hole.

Quantum levels of gravitational sphere or Electron black hole rows - Mass in a body increases in unit of $\sqrt{S}$ unit masses and it is now supported by next higher quantum level, as one Electron black hole row of $\sqrt{S}$ bound treos layers is added and it increases the radius of gravitational sphere at next quantum level (repeated upto $\sqrt{S}$ quantum level).

Electron black hole–1, 3, 5, 7 electron black holes and so on .... (or 2n–1 electron black holes in n th ‘electron black hole row') upto 2 √S –1 electron black holes, in 1st, 2nd, 3rd , 4th ..... and √S electron black hole row respectively at 1st, 2nd, 3rd, 4th and √S th quantum level in kinetic coloumn of fourth dimension now named as gravitational sphere.

SUMMARY OF DEFORMATION OF SPACE-MATRIX IN ALL FOUR DIMENSIONS OF SPACE-TIME

Contraction Of Unit Space Matrix (One Cube of S bound treos length)	**Unit of Increment of mass energy at √S quantum levels in each dimension**	**Particle generated and supported**	**Range of spread of mass energy packet**	**Load exerted (on each one bound treo)**	**Groun energy Dimens**
	One		Decreasing Reduced Compton wavelength	From one free treo to S free treos (one	

LENGTH	Quanta mass energy	All photons of EM spectra	From S bound treos To √S bound treos	quantum) (on each bound treo along wavelength of photon packet)	One Kineto one deform bound t
LENGTH & BREADTH	One Unit Electron (√S × S Free treos)	Unit Electron, All elementary particles, Nucleons, All Elements & Molecules Upto one Unit mass.	Decreasing Reduced Compton wavelength From √S bound treos To one bound treo (on one Graviton)	From one quantum to S quanta (on each bound treo along wavelength of elementary particle)	S Kinet in one orbitu
LENGTH, DEPTH &	One Unit Mass (S × S Free treos)	From one Unit Mass (Planck mass)	Increased wavelength From One Graviton	From one unit mass (S Quanta) to S unit	S^2 Kineto

BREADTH		Upto √S Unit masses	To 2√S–1 Gravitons	masses (at gravitational center)	at One Gravito
SPACE-TIME (L, B, D) & TIME	One Electron Black Hole (√S × S × S free treos)	From √S Unit masses Upto S Unit masses (in one Unit Black Hole)	Increased wavelength from 2√S–1Gravitons To 2S–1 Gravitons in last layer	From S unit masses To S^2 unit masses (at Gravitational center)	S^3Kine in one Electro Black h

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[1]. It will be interesting to read the following lines of a book about our universe.

This is very true about Clifford “He should be regarded as the originator of the concept of space as a substance, a concept now being advocated by theoretical physicist. Clifford wrote, for example, that what actually occur when the matter moves is that the curvature of space changes. In the physical world, he continued, there is nothing except this change which is subject to the law of continuity. This statement is nothing but complete geometrisation of matter: - that is to obtain all the properties of matter from the properties of empty space (and time.)

" Physical properties of matter and the properties of curved space time (space-matrix) were related. Clifford wondered whether we could be wrongly interpreting as physical things that in reality arose due to the curvature of space. It might be that all or some of the forces that we call physical, originate from the geometry of our space." from Space Time Gravitation 1984, English translation, Mir publishers, 1987

[2]. Straight lines (treos have only one dimension of length) carving three dimensions of space will construct only cubical space-matrix. Our universe is not cuboid but it is curved. It is already known that mass / energy curves space-matrix by its deformation. So we can safely conclude that all observed curvature of universe is created by deformation of its omnipresent space-matrix, in this self supported universe, by its own mass.

The present size of our contracted deformed universe is 10^{61} bound treo distance (13.7 billion light years). While these S books in one line, will be possible size of our undeformed fully expanded flat universe just before the big crunch (S^2 or 10^{86} bound treo distance is radius of very very big universe) .

3. The √S quantum levels in each dimension form from S units in each dimension, in deformation of one unit space-matrix. This deformation can be visualized as deformation of a cuboid book, where S alphabets in one line, S lines in one page, S pages in one book are deformed respectively in three dimensions of Space and then finally S books are deformed in deformation of all four dimensions of space along with deformation of time.

4. KK theory describes Kaluza-Klein towers: For example, on the simplest of principles, one might expect to have standing waves in the extra compacted dimension (in the treo model it is fifth dimension of energy). If a spatial extra dimension is of radius R, the invariant mass of such standing waves would be $M_n = nh/Rc$ with n an integer, h being Planck constant and c the speed of light. This set of possible mass values is often called the Kaluza–Klein tower.

5. The Electron Black holes are produced by complete contraction / deformation of unit space-matrix in all three dimensions of space (length, depth and breadth). It is made up of under root S layers equal to wavelength on which mass-energy of unit electron is distributed. As its radius is smaller then Schwarzschild radius ($2MG/c^2$) it is a black hole.

6. The Newton's equations of gravitational field describes ($MG = r^2a$ and $MG = rv^2$) and on calculation we get $ra = v^2$.

With the newly proposed interpretation of these equations, a is the diluting mass pressure of body at a distance r, which exert a load ra on space-matrix. This ra (i.e. diluted load a at a distance r) gets neutralized at each point (as, $ra = v^2$), by v^2 (equal) number of kinetons/ deformed bound treos (calculated as, $v^2=MG/r$) and thus it produces the gravitational (coloumn) field of body. The value of this load i.e. ra, can be calculated in terms of number of free treos. This ra load is balanced by the gravitational kinetic energy v^2 which is also calculated as number of kinetons or deformed bound treos, and both numbers are always equal at any point in the gravitational field.

While at gravitational center (when r is one) the load of total number of free treos (full mass of body), is balanced by equal kinetic energy v^2.

7. Schrödinger's equations for motion of a linear harmonic oscillator

$y = 1/2\ e^{-k2/2}$ when a/b =1

$y = 2K\ e^{-k2/2}$ when a/b = 3

$y = (4K^2-2)\ e^{-k2/2}$ when a/b = 5

$y = (8K^2-12K)\ e^{-k2/2}$ when a/b = 7

it can be calculated and so on. 9,11,13,15 ….

Proper values of a/b are given by 2n + 1 (n is an integer), the values of y corresponds to characteristics Eigen-functions while Eigen value is wavelength (length) of elementary particle

8. In the early 1600s, Johannes Kepler proposed three laws of planetary motion. Kepler was able to summarize the carefully collected data of his mentor - Tycho Brahe: Sir Newton used this data to explain gravitation.

(a) The path of the planets around the Sun is elliptical in shape, with the center of the Sun being located at one focus. (The Law of Ellipses)

(b) An imaginary line drawn from the center of the Sun to the center of the planet will sweep out equal areas in equal intervals of time. (The Law of Equal Areas)

(c) The ratio of the squares of the periods of any two planets is equal to the ratio of the cubes of their average distances from the sun. (The Law of Harmonies)

9. (Frequency × wavelength = speed of light = S bound treo distance per second)

10. Electron mass is distributed on its reduced Compton wavelength on n bound treos along the radius of a circle, while the outermost layer this n layered coloumn have 2n–1 bound treos, (in its supporting and rotating kinetic coloumns) forms a circle 2n–1 × π, which indicates its Compton wavelength.

11. 2n–1 sub kinetic coloumns are in any n^{th} layer of one full kinetic/ unit gravitational coloumn × kinetic energy in any one sub kinetic coloumn = S^2; Thus each de Broglie wave formed in each one layer of one full kinetic/ unit gravitational coloumn consumes total S^2 kinetic energy of second dimension.

DEFORMATION IN FIRST DIMENSION OF LENGTH OF UNIT SPACE-MATRIX

This chapter will explain :

How First Dimensional deformation of space-matrix in length produces EM spectrum and EM forces.

First dimensional deformation is gradually increasing contraction in one dimension of length of one unit space-matrix, to generate equal number of kinetons which can support the load of one free treo to S free treos (i.e. one quanta).

Key Parameters in Deformation of Unit Space-matrix in First Dimension

Number of quantum levels in first dimension = √S quantum levels.

Mass-energy limits of first dimension = From one quantum in unit photon to √S quanta in gamma photon.

Geometry of deformation = Sub-kinetic coloumn, layers in sub-kinetic coloumn and kinetons which form EM waves.

Reduced Planck constant = It is mass energy of S number of free treos or one quantum mass energy in one unit photon, which increases (as one unit) at each of √S quantum levels, to form all √S type of photon packets of EM spectrum.

Thus mass energy of any one photon packet = Unit of increment of first dimension (one quantum mass energy) × Quantum number at which this photon packet is placed.

With increasing mass energy the photon packet spreads on its progressively reducing Reduced Compton (denoted as RC henceforth) wavelength and the load exerted per apex bound treo, increases in terms of free treos by square of quantum level, from one free treo load to maximum S free treos load.

Thus load at each apex bound treo = Mass energy in packet / RC wave length.

Planck constant is angular momentum of one quantum mass-energyWith increasing mass energy by one quanta at each quantum level a new photon packet is formed. Space matrix deforms one additional layer in each sub kinetic coloumn present in wave length, which increases its angular momentum by one unit.

Linear deformation increases at each next quantum level, as 2n–1 kinetons are added at any n th quantum level, which totals to n^2 kinetons in one n layered sub kinetic coloumn.

Angular deformation = Angulation of all sub kinetic coloumns in RC wave length increases in first dimension from 0º to 90º i.e.[(quantum number / √S) × 90°]

Reduced Compton (RC) Wavelength = Length of uniform spread of this photon packet = Number of apex bound treos or number of sub-kinetic coloumns which supports this photon packet.

or RC wave length = S bound treos length / Number of quanta in photon packet.

or RC wave length = Wave length at first quantum level / Quantum number.

Frequency = Number of EM waves formed per second = S / Wave length

This Frequency as described by treo model = Number of quanta in photon packet = number of bound treo layers in each sub-kinetic coloumn.

Ground energy density of first dimension = One kineton

Upper limit of deformation in first dimension = One quantum load is the maximum limit of load supported by first dimensional deformation.

Pair production = Split of gamma photon into electron and positron by separation of trough and crest of EM wave in one wave, which happens when load becomes one quantum and angular momentum increases to 90º.

Contraction of unit space-matrix in one dimension of Length

is the story of conversion of potential energy of bound treos into kinetic energy of one kineton to S kinetons, which

supports the load of all photon packets forming EM spectrum

Unit space-matrix is a cube of S bound treos length, which acts as an *infinite potential well* in which only √S quantum levels are possible in each dimension of length, breadth and depth.

The particle in infinite potential well may occupy only certain positive energy levels. Likewise, it can never have zero energy, meaning that the particle can never 'sit still'.

There can be one to √S waves in unit space matrix (a cube of S bound treo length) with increasing mass-energy in photon packets. By increasing contraction of unit space-matrix along S bound treos in length, √S waves of progressively decreasing RC wave length are formed on which this photon packet spreads, with its increasing 'photon packet density' and 'increased 'load'.

As less then one layer of space-matrix can not be deformed, the mass-energy in photon packets increases only in the unit of one quantum (hv_1). The frequency or number of EM waves per second increases, due to increase of angular momentum of photon packet by one unit, by formation of one more layer in each sub kinetic coloumn present in wave length. .

Frequency of photon packet is equal to the number of quanta mass-energy in this photon packet. While its wavelength is the number of apex bound treos or total number of sub kinetic coloumns on which this photon packet spreads.= S bound treos / Number of quanta mass energy in photon packet.

All Photon packets have rest mass-energy

It is an axiom of physics that a photon has no rest mass-energy. Mass less particles do not have a rest frame of reference. They move at the speed of light in any frame of reference. However if light is confined in a box it is now forced to have a specific frame of reference. This "confined light" then exhibits properties normally associated with a rest frame equivalent energy ($m = E / c^2$) in the frame of reference of the box. There are several examples which indicate that confined photon has its rest mass-energy.

Suppose, a laser cavity has a meter separation between two highly reflective mirrors. If the laser in this example had 1.5×10^8 *watt circulating in between two mirrors, the energy confined between two mirrors will be 1 Joule and laser photons will exert 1 Newton force on two reflecting surface.*

In a second example; at very high temperatures e.g.150,000 K at the core of Sun the black body radiations will be X-rays and these X-ray photons in one cubic meter area, will have 1 gm mass.[1]

Before starting to construct the model, we should first talk about the peculiarity of photon mass, which will also clarify concept of 'wave particle duality', interference, quantum tunneling & mechanism of weak forces. All these examples point out that some thing is special in wave motion of photon.

Photon exhibits dualistic nature, as it sometimes act as a wave and sometimes as a particle, while in wave motion it distributes its mass-energy, as one free treo on one bound treo on its all sub kinetic coloumns, while as particle its mass-energy condenses along its (wave) length and exerts load on each apex bound treo.

Photon as Wave (D.3.1b : Photon as a Wave)

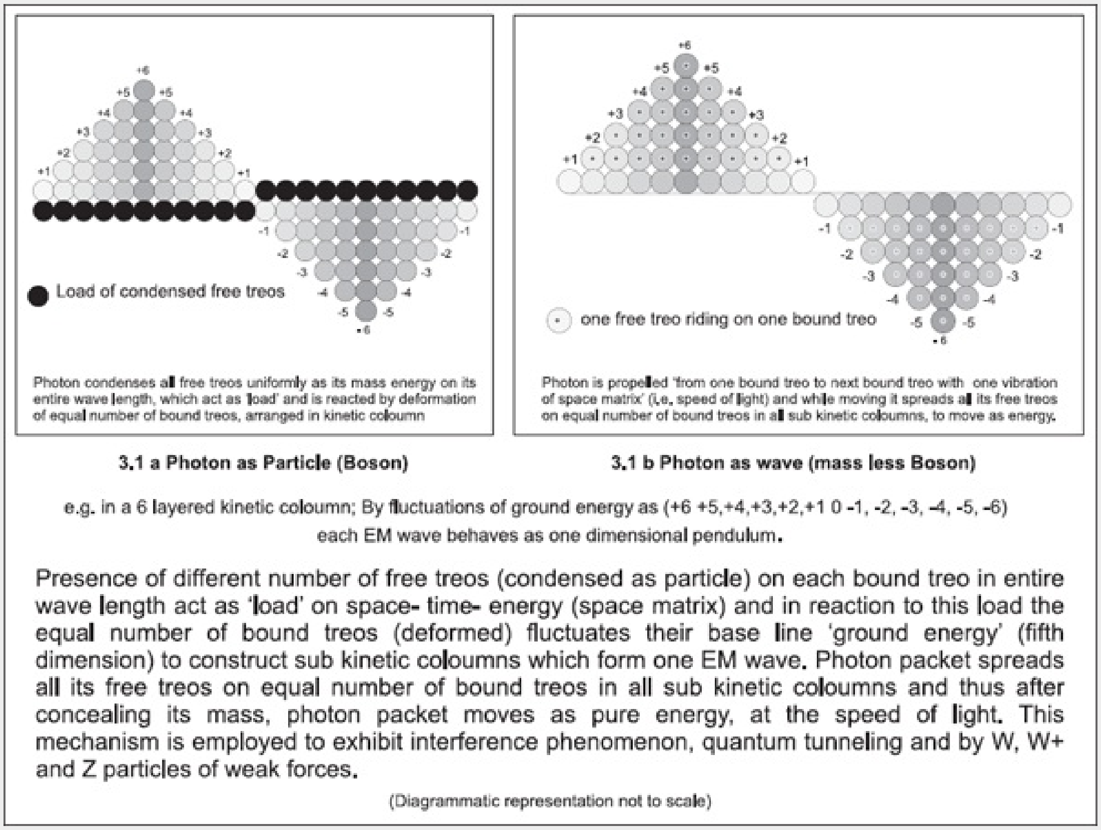
To produce whole EM spectrum mass-energy in photon packets increases in unit of one quantum at each of √S quantum levels.

This mass-energy of all free treos in any moving photon packet, rides on equal number of kinetons (on total number of kinetons present in all sub kinetic coloumns along its wavelength) as one free treo ride on one kineton. Thus here the mass-energy in photon packet moves as wave at the speed of light, by concealing its rest mass.

By similar distribution of their mass energies on their respective kinetic coloumns all elementary particles can also move as wave and exhibit ‘wave particle duality’.

Photon as Particle (D.3.1a : Photon as Particle)

But when photon as wave strikes on a metal plate it gets obstructed (not moving) and all its mass-energy as free treos now condenses at all apex bound treos equally along its wavelength. *Thus as a particle any photon packet of sufficient size & kinetic (mass) energy can displace one floating electron from the surface of this metal plate and thus exhibits ‘photo electric effect’.*


+6
+5
+4
+3
+2
+1
-1
-2
-3
-4
-5
-6
Load of condensed free treos
one free treo riding on one bound treo

Photon condenses all free treos uniformly as its mass energy on its entire wave length, which act as 'load' and is reacted by defomation of equal number of bound treos, arranged in kinetic coloumn

3.1 a Photon as Particle (Boson)

Photon is propelled 'from one bound treo to next bound treo with one vibration of space matrix' (i.e. speed of light) and while moving it spreads all its free treos on equal number of bound treos in all sub kinetic coloumns, to move as energy.

3.1 b Photon as wave (mass less Boson)

e.g. in a 6 layered kinetic coloumn; By fluctuations of ground energy as (+6 +5,+4,+3,+2,+1 0 -1, -2, -3, -4, -5, -6) each EM wave behaves as one dimensional pendulum.

Presence of different number of free treos (condensed as particle) on each bound treo in entire wave length act as 'load' on space- time- energy (space matrix) and in reaction to this load the equal number of bound treos (deformed) fluctuates their base line 'ground energy' (fifth dimension) to construct sub kinetic coloumns which form one EM wave. Photon packet spreads all its free treos on equal number of bound treos in all sub kinetic coloumns and thus after concealing its mass, photon packet moves as pure energy, at the speed of light. This mechanism is employed to exhibit interference phenomenon, quantum tunneling and by W, W+ and Z particles of weak forces.

(Diagrammatic representation not to scale)

Diagram 3.1 : (a) **Photon as a Particle** 3.1 (b) **Photon as a Wave**

Mass-energy of all type of photon packets which form EM spectrum are integral multiple of One quantum mass-energy or S number of free treos

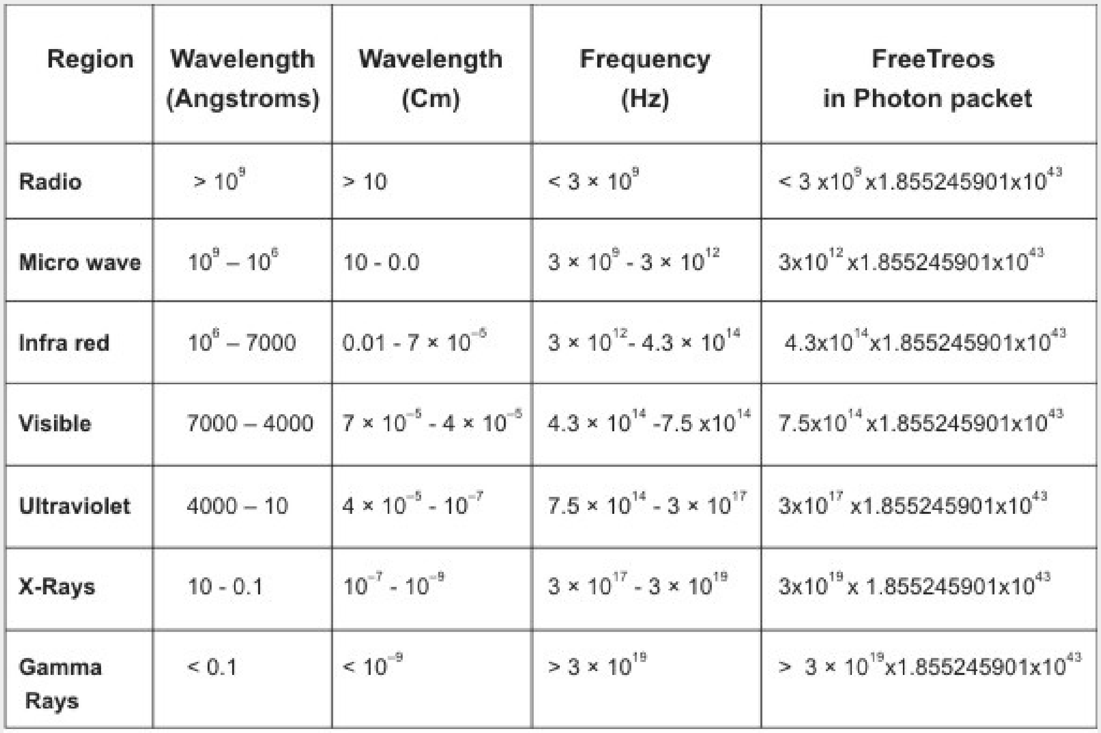
The mass-energy of all photon packets is integral multiple of 1 quantum mass-energy ($1.855245901 \times 10^{43}$).

One unit photon packet having one quantum mass energy or $1.855245901 \times 10^{43}$ free treos or S free treos, which spread on equal number of S bound treos on one side of cube of one unit space-matrix, i.e. on its 'S bound treo RC wave length' and produces one wave in one second (frequency1). Thus it exerts a minimum possible 'load' on space-matrix of just one free treo.

2 quanta photon packet (2 × S free treos) spreads on S / 2 bound treos (according to formula, RC wave length of any photon packet = S bound treo / number of quanta mass energy in photon packet) and produce 2 waves in one second (frequency 2). Now there is uniform 'load' of 4 free treos on each apex bound treos on its entire wavelength. When this mass energy doubles and becomes two quanta (2 S free treos in photon packet), it spread over S /2 bound treos distance according to proposed model, and thus it exerts 4 free treos load on each apex bound treo in its RC wave length.

Similarly 3 quanta photon packet (3 × S free treos mass-energy) spreads on S/3 apex bound treos in RC wave length and produces 3 waves in one second (frequency 3). Now photon packet density becomes 9 and uniform 'load' of '9 free treos per apex bound treo' spreads on S/3 bound treo distance of RC wavelength.

Finally the biggest √S quanta gamma photon packet (√S × S free treos) spreads on S/√S apex bound treos in its RC wavelength, and it exerts one quanta or S free treos load on each apex bound treo of this RC waves length. In this case S free treos or one quanta is photon packet density and this 'S free treos or one quanta' is also uniform load on each apex bound treo in wave length. (RC wave length of any photon packet = wave length at first quantum level / quantum number.)



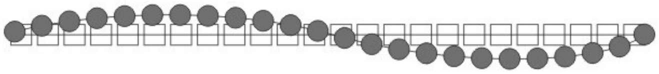
Region	Wavelength (Angstroms)	Wavelength (Cm)	Frequency (Hz)	FreeTreos in Photon packet
Radio	$> 10^9$	> 10	$< 3 \times 10^9$	$< 3 \text{x} 10^9 \text{x} 1.855245901 \text{x} 10^{43}$
Micro wave	$10^9 – 10^6$	10 - 0.0	$3 \times 10^9 - 3 \times 10^{12}$	$3 \text{x} 10^{12} \text{x} 1.855245901 \text{x} 10^{43}$
Infra red	$10^6 – 7000$	$0.01 - 7 \times 10^{-5}$	$3 \times 10^{12} - 4.3 \times 10^{14}$	$4.3 \text{x} 10^{14} \text{x} 1.855245901 \text{x} 10^{43}$
Visible	7000 – 4000	$7 \times 10^{-5} - 4 \times 10^{-5}$	$4.3 \times 10^{14} - 7.5 \text{x} 10^{14}$	$7.5 \text{x} 10^{14} \text{x} 1.855245901 \text{x} 10^{43}$
Ultraviolet	4000 – 10	$4 \times 10^{-5} - 10^{-7}$	$7.5 \times 10^{14} - 3 \times 10^{17}$	$3 \text{x} 10^{17} \text{x} 1.855245901 \text{x} 10^{43}$
X-Rays	10 - 0.1	$10^{-7} - 10^{-9}$	$3 \times 10^{17} - 3 \times 10^{19}$	$3 \text{x} 10^{19} \text{x} 1.855245901 \text{x} 10^{43}$
Gamma Rays	< 0.1	$< 10^{-9}$	$> 3 \times 10^{19}$	$> 3 \times 10^{19} \text{x} 1.855245901 \text{x} 10^{43}$

Number of free treos in all photons which form EM spectrum

Table 3.1

One quanta (S free treos) 'Unit photon packet'
Deformation in Length of Unit space Matrix

(All √S type of photons in EM spectrum have integrals of one quanta mass energies)



Frequency of EM wave = 1 = Number of Kineton layers in each sub kinetic coloumn
= Number of quanta mass energy in packet = Number of EM waves per second.

(Wave) length of photon packet = S number of sub kinetic Coloumns in wave length

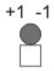
load - **one free treo** (as S free treos in photon packet spreads on
S bound treos in wave length)

One free treo load is supported by one kineton (deformed bound treo) in one layer

Side by side placed Sub-kinetic coloumns (Transverse section) of EM wave

Equal reaction to applied Load =1kineton (ground energy of first dimension)
Load = of one free treo

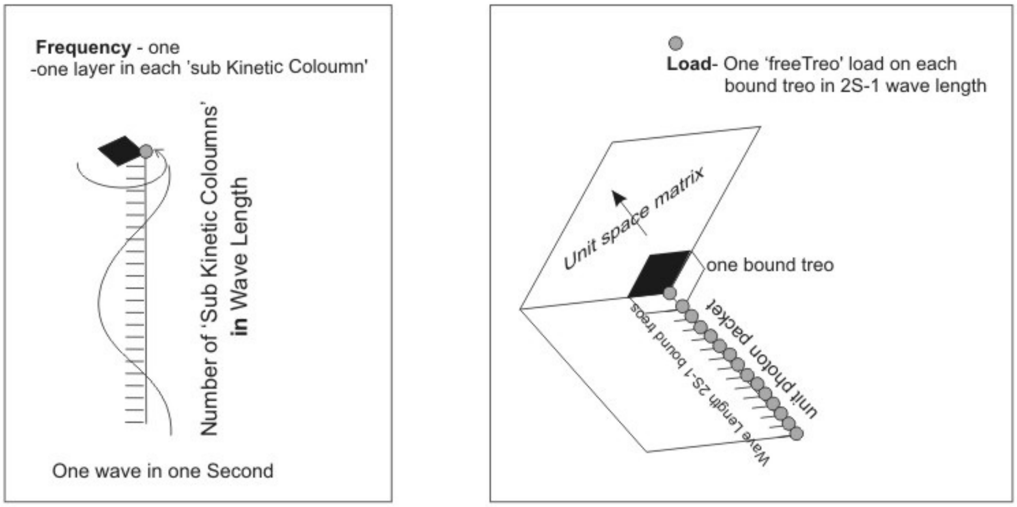
layer to layer Energy in each sub kinetic coloumn



Ground Energy fluctuations with time (in each kineton in first layer of kinetic coloumn)
EM WAVES ARE PENDULUMS IN ONE DIMENSION

diagramatic representation

S number of 'free treos' (one quanta energy) spreads on 2S-1 number of ' bound treos' and rotate once with rotating sub kinetic coloumns in one second (in S number of vibrations).


Frequency - one
-one layer in each 'sub Kinetic Coloumn'
Number of 'Sub Kinetic Coloumns' **in Wave Length**
One wave in one Second
Load- One 'freeTreo' load on each bound treo in 2S-1 wave length
Unit space matrix
one bound treo
unit photon packet
Wave Length 2S-1 bound treos

One quanta unit photon packet

Diagram 3.2 : One Quantum Free Treos 'Unit Photon Packet'

'Free treos' load on each apex bound treo in wave length is supported by one sub kinetic coloumn, which have equal number of 'kinetons'.

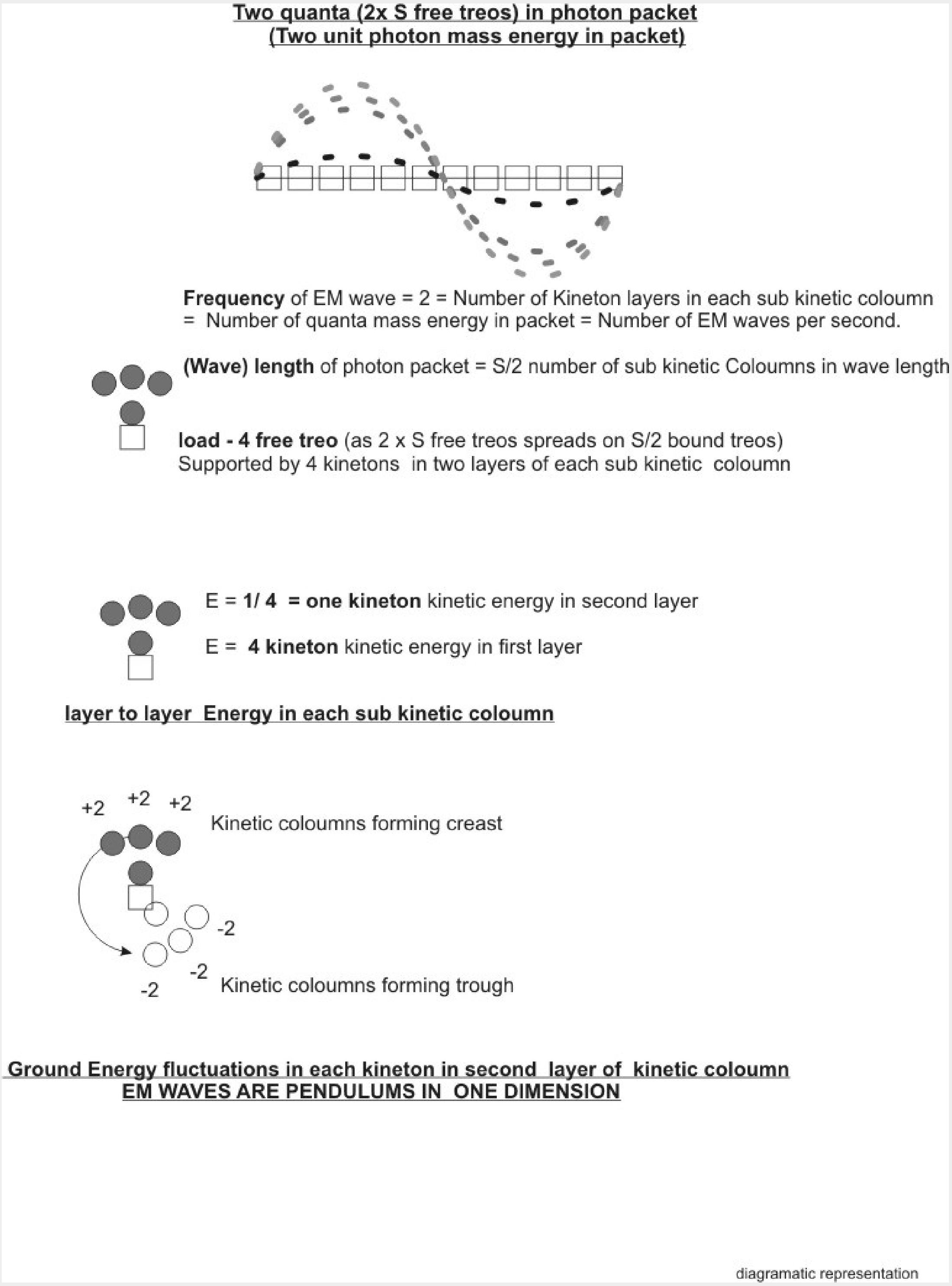
To support any load at one apex bound treo, one sub kinetic coloumn form.

In case of one unit photon (S free treos or one quanta mass energy) its one free treo load, is supported by 1 kineton as one layered S number of sub kinetic coloumns present through out its RC wavelength. (D.3.2 : One quantum)

Two quanta photon packet, exert ‘4 free treo load per apex bound treo’ and is supported by 2 layered (1 + 3 = 4 kinetons) S/ 2 number of ‘sub kinetic coloumns’ in its RC wavelength.

Along with the linear deformation of space-matrix the angular deformation of this photon packet also increases to two units. Thus this photon packet rotates twice per second (i.e. frequency 2) due to two layers in its each sub kinetic coloumn, and forms two EM waves in one second. (D.3.3 : Two quanta and D.3.4 : Three quanta)

And so on. It goes on up to ‘√S quanta mass energy in gamma photon packet’. And now √S layered ‘sub kinetic coloumns’, each having S number of kinetons (arranged according to coloumn geometry) support one quanta ‘load’ (of S free treos) on each apex bound treos in its √S bound treo wavelength. With √S angular momentum this gamma photon packet rotates √S times in one second and forms √S EM waves per second (frequency). (D.3.6)



Two quanta (2x S free treos) in photon packet
(Two unit photon mass energy in packet)

Frequency of EM wave = 2 = Number of Kineton layers in each sub kinetic coloumn = Number of quanta mass energy in packet = Number of EM waves per second.

(Wave) length of photon packet = S/2 number of sub kinetic Coloumns in wave length

load - 4 free treo (as 2 x S free treos spreads on S/2 bound treos)
Supported by 4 kinetons in two layers of each sub kinetic coloumn

E = **1/ 4 = one kineton** kinetic energy in second layer

E = **4 kineton** kinetic energy in first layer

layer to layer Energy in each sub kinetic coloumn

Kinetic coloumns forming creast

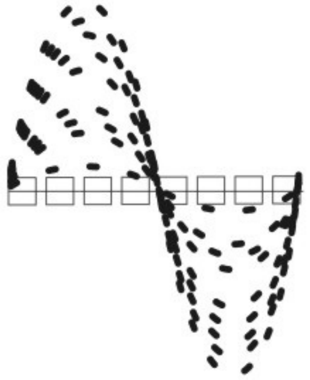
Kinetic coloumns forming trough

Ground Energy fluctuations in each kineton in second layer of kinetic coloumn
EM WAVES ARE PENDULUMS IN ONE DIMENSION

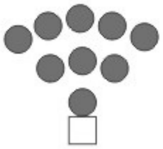
diagramatic representation

Diagram 3.3 : Two Quanta Photon packet

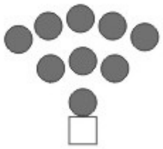
Three quanta (3x S free treos) in photon packet at third quantum level
(Three unit photon mass energy in packet)



Frequency of EM wave = Number of Kineton layers in each sub kinetic coloumn = 3
(Wave) length of photon packet = S/3 number of sub kinetic Coloumns in wave length



load - **9 free treo** (as 3 x S free treos spreads on S / 3 bound treos)
Supported by 9 kinetons in all 3 layered Sub kinetic coloumns

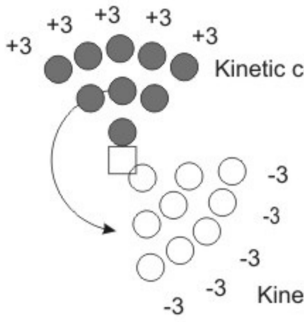


E 9/9 One kineton kinetic energy in third layer

E 9/4 kineton kinetic energy in second layer

E 9 kineton kinetic energy in first layer (supports load of 9 free treos mass energy)

layer to layer Energy in each Sub kinetic coloumn



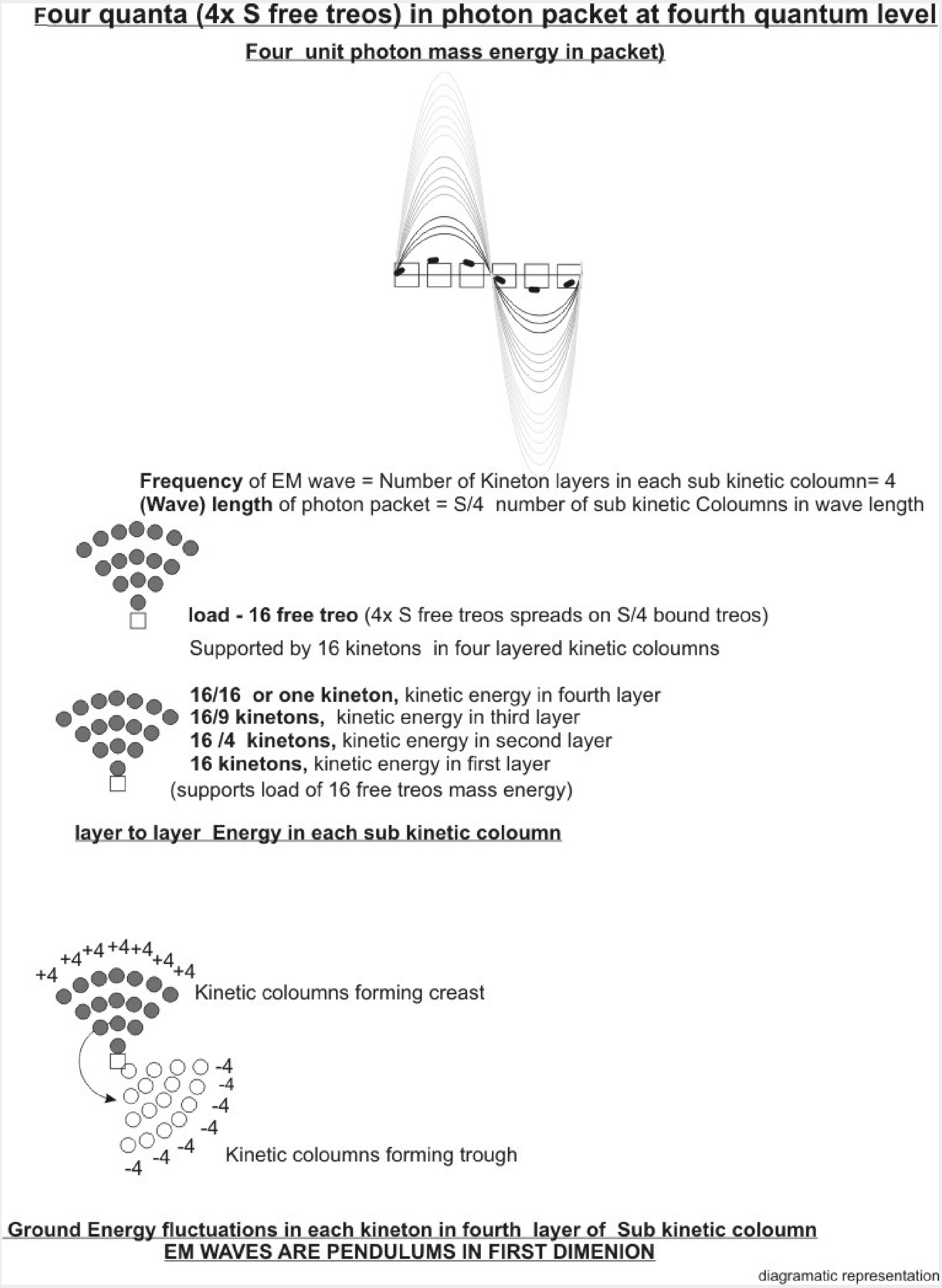
Kinetic coloumns forming creast

Kinetic coloumns forming trough

Ground Energy fluctuations in each kineton in third layer of sub kinetic coloumn

EM WAVES ARE PENDULUMS IN ONE DIMENSION diagramatic representation

Diagram 3.4 : Three Quanta Photon packet



Four quanta (4x S free treos) in photon packet at fourth quantum level

Four unit photon mass energy in packet)

Frequency of EM wave = Number of Kineton layers in each sub kinetic coloumn= 4

(Wave) length of photon packet = S/4 number of sub kinetic Coloumns in wave length

load - 16 free treo (4x S free treos spreads on S/4 bound treos)

Supported by 16 kinetons in four layered kinetic coloumns

16/16 or one kineton, kinetic energy in fourth layer

16/9 kinetons, kinetic energy in third layer

16 /4 kinetons, kinetic energy in second layer

16 kinetons, kinetic energy in first layer

(supports load of 16 free treos mass energy)

layer to layer Energy in each sub kinetic coloumn

Kinetic coloumns forming creast

Kinetic coloumns forming trough

Ground Energy fluctuations in each kineton in fourth layer of Sub kinetic coloumn

EM WAVES ARE PENDULUMS IN FIRST DIMENION

Diagram 3.5 : Four Quanta Photon packet

We can notice that √S number of ‘sub kinetic coloumns’ are arranged side by side in wave length (length) and each such sub kinetic coloumn has √S kineton layers (height or frequency) and 2√S –1 kineton in their last layer (breadth) and thus they form one ‘cubical deformation of √S bound treos' which rotates in space matrix to form one EM wave. (D.3.6)

Spin : All photon packets rotate by integral number of rotations per second, and after each one rotation it regains original shape so the spin of all photon packets is denoted by integral 1.

How EM waves form?

Formation of sub kinetic coloumns which form EM waves

As soon as the photon of a particular fixed frequency (equal to number of quanta mass energy or number of layers in sub kinetic coloumn) is born, the number of quanta in this photon packet decides the number of layers of unit space matrix involved to support this mass energy and the kinetic coloumns are formed according to coloumn geometry.

One quantum mass energy of unit photon packet having S free treos, spreads and involves just one layer of S bound treo in length (RC wave length or one line of S bound treos) of one sheet (page) of unit space matrix (a cuboid book) and it forms one EM wave in S vibrations per second.

Two quanta mass energy of 2S free treos, which should spread on 2 layers of S bound treos length rather spreads on S/2 apex bound treos in its RC wave length and achieves a uniform photon packet density of 4 free treos per apex bound treo. This packet at its birth recruits next two bound treo layers of unit space matrix (next 2 lines of one page) and deforms them according to coloumn geometry at second quantum level. Thus it forms 2 layered S/2 number of sub kinetic coloumns on S/2 apex bound treos in wave length and each having 1 & 3 kinetons in first and second ‘kineton layer’ respectively. (Leaving 1st quantum level vacant).

Similarly three quanta mass energy of 3S free treos, spreads on S/3 apex bound treos in its RC wave length achieves a uniform photon packet density of 9 free treos per apex bound treo. This packet at its birth recruits next three bound treo layers of unit space matrix (next 3 lines of one page) and again deforms them according to coloumn geometry at third quantum level. Thus it forms 3 layered S/3 number of sub kinetic coloumns on S/3 apex bound treos in wave length and each having 1,3 & 5 kinetons in first second and third ‘kineton layer’ respectively. (Leaving 1st and second quantum levels vacant).

With each addition of one quanta mass energy in photon packet the same process is repeated at next quantum level by recruitment of $2n-1$ new bound treo layers at n th quantum level for n quanta mass energy in photon packet and formd n layered sub kinetic coloumns at each of S/n apex bound treos at its progressively reducing RC wave length.

Finally $\sqrt{S}$ quanta mass energy of $\sqrt{S} \times S$ free treos, which should spread on $\sqrt{S}$ layers of S bound treos length concentrates and spreads on $S/\sqrt{S}$ apex bound treos in its RC wave length and achieves a uniform ‘photon packet density’ of S free treos (one quantum) per apex bound treo. This packet at its birth recruits next $\sqrt{S}$ bound treo layers of unit space matrix (last $\sqrt{S}$ lines of one page) and deform them according to coloumn geometry at $\sqrt{S}$ quantum level. Thus it forms $S/\sqrt{S}$ number of sub kinetic coloumns on $S/\sqrt{S}$ apex bound treos in wave length and each having 1,3 & 5.........$2\sqrt{S}-1$ kinetons in first, second, third......... up to last $\sqrt{S}$ th layer respectively and total S kinetons are present in each of $\sqrt{S}$ layered kinetic coloumn.

S LAYERS ARE DEFORMED TO FORM ONE EM WAVE FORMS TO SUPPORT ONE QUANTA MASS ENERGY OF ANY PHOTON PACKET

Bigger Photon Packet of n quanta mass energy forms n kineton layered sub kinetic coloumns on S/n apex bound treos in wave length and rotates faster, n times per second at n frequency to form n EM waves in one second.

n = number of quanta mass-energy in packet = n number of its rotations per second = Frequency n.

It is to be noted that n is also the number of layers in each of its sub kinetic coloumn = n number of EM waves formed in one second by this photon packet.

Wavelength of this photon packet = length of one EM wave = S /n.

(Speed of light = S bound treos per second displacement of photon packet in S vibrations = wavelength × frequency)

For any n quanta photon, S/n number of sub kinetic coloumns in its one wave length, vibrate one by one with each vibration of space matrix to form one EM wave (total S/n number vibrations). These S/n number of sub kinetic coloumns which form this one EM wave have total S layers (S/n number of sub kinetic coloumns × n number of layers in each sub kinetic coloumn). Thus S × n layers are involved to form n EM waves for n quanta photon packet per second.

(1) for one quanta photon packet total 1 × S layers by S vibrations support 1x S free treos (and form 1 EM wave)

(2) for two quanta photon packets total of 2 EM waves involve 2 × S layers in S vibrations in one second to support 2S free treos spread on its one RC wave length for one second.

(3) for three quanta photon packets total of 3 EM waves involve 3 × S layers in S vibrations in one second to support 3S free

treos spread on its one RC wave length for one second.
(4) for √S quanta photon packets total of √S EM waves involve √S × S layers in S vibrations in one second to support √S × S free treos spread on its one RC wave length for one second.
Thus in any n quanta photon packet total S × n layers are there to form all n EM waves (which form in one second) in S vibrations in one second and support total S × n free treo mass-energy of this photon packet, for one second.
In other words S number of layers by its S vibrations in one second are required to support each S free treos or one quantum mass-energy for one second during its one rotation which form one EM wave (in case of any photon packet).
It can also be inferred that one layer by its S vibrations in one second for moving mass (or S vibrations of one bound treo for stationary mass) is required to support a load of one free treo for one second or one vibration of one bound treo can support one free treo load for one Planck least time and it is the basis of quantum gravitation.

‘GAMMA PHOTON’

√SX S number of 'free treos' (√S Quanta energy) spreads on S/√S number of bound treos (in wave length with load of one quanta) & rotates √S times per second (frequency)

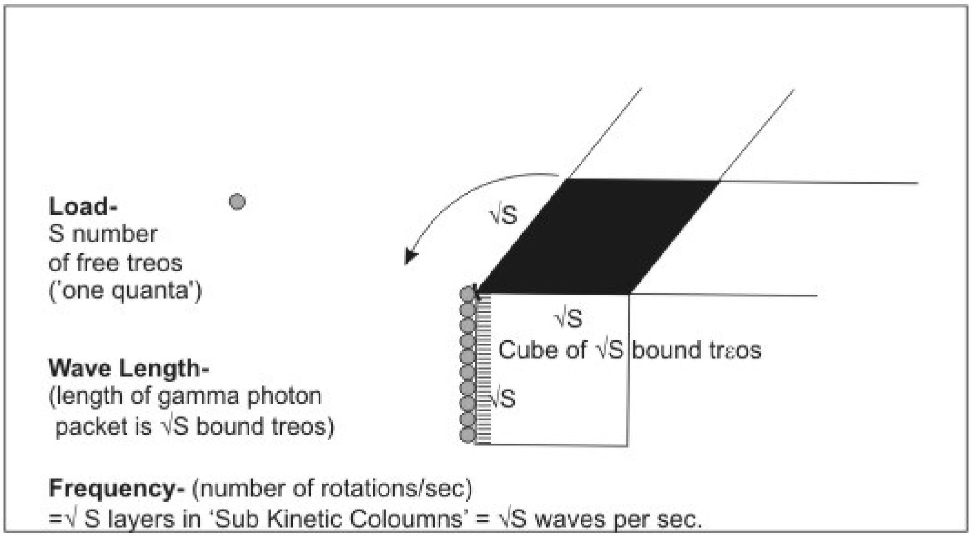

Load-
S number
of free treos
('one quanta')
Wave Length-
(length of gamma photon
packet is √S bound treos)
Frequency- (number of rotations/sec)
=√ S layers in ‘Sub Kinetic Coloumns’ = √S waves per sec.
√S
√S
Cube of √S bound trεos
√S

Diagram 3.6: Cubical deformation by all sub kinetic coloumns of gamma photon

With increase of each one quanta mass-energy in photon packet (by one unit); the angular momentum *hv* of photon packet, frequency, rate of rotation and number of EM waves, all increase by one in one second.

With each increase in mass by ‘one quanta mass-energy’ at each next quantum level, there is increase of one layer in all ‘sub kinetic coloumns’ of 2n–1 kinetons at n th quantum level (distributed along its RC wavelength) and hv the ‘angular momentum of photon packet’[2] increases by 1, 2, 3 ..... √S units as hv_1, hv_2, hv_3 upto $hv_{\sqrt{S}}$.

With one layer in its each sub kinetic coloumn a ‘unit photon packet’ rotated by just one plane in one vibration. By S number of vibrations in one second this photon packet will rotate in S number of planes to complete its one circle.

Any n quanta photon packet rotates by one full circle in S/n vibrations to form one EM wave in S /n second. Thus n layered S/n number of sub kinetic coloumns in RC wave length will rotate n times in S vibrations in one second (n frequency) to form n EM waves. Hence one EM wave per quanta mass energy is formed to support each one quanta mass energy of any photon packet for one second.

Each sub kinetic coloumn vibrates once by one vibration and thus S/n sub kinetic coloumns will vibrate one by one to form one EM wave in S/n second. Each n layered sub kinetic coloumn will rotate the photon packet by n unit angle and S/n all sub kinetic coloumns in wave length will rotate the packet by n × S/n angle = S angle (one unit angle = 360 degree /S) or one full circle in their S/n vibrations by n unit angular momentum of each sub kinetic coloumn (due to n number of kineton layers in each sub kinetic coloumn) and thus there will be ‘n complete rotations in S vibrations of one second. So here n= no of layers in each sub kinetic coloumn= its frequency of rotation

(In 360° of a circle there are S number of Planes of vibrations in which each undeformed bound treo of space matrix vibrates in one second) (D.1.2)

Thus ‘n quanta’ in photon packet and its all ‘n layered kinetic coloumns’ with ‘n unit angular momentum of each sub kinetic coloumn’ will rotate photon packet ‘n’ times by ‘S vibrations in one second’ and form ‘n’ waves in one second. *While in first dimension each sub kinetic coloumn at each next quantum level also tilts by* (quantum number / √S) × 90° . Thus from unit photon to gamma photon it angulates by 90 degree and start directing its vector from vertical to horizontal direction where the load is now placed.

Factors deciding upper limit of EM spectrum

(1)*There is a geometric restrain* that in a box (*infinite potential well*) , the frequency of sinusoidal wave can not be more then its wavelength (in terms of number of apex bound treo distance), and in a biggest gamma photon of EM spectrum the ‘Frequency’ of wave becomes equal to its ‘wavelength’, which is √S. (2) One quantum mass energy (S free treos) is the upper limit of ‘load’ of first dimension.

(2) One EM wave is required to support one quanta mass energy.

(3) There are only √S quantum levels in each dimension.

(4) Propulsion at the speed of light by the translational movement of photon packet on space-matrix ‘from one bound treo to next bound treo per vibration’ is not possible for the ‘loads’ of more then one quanta; the load in gamma photon.

Hence the biggest possible gamma photon packet is of √S quanta mass energy .It exerts a uniform load of one quantum at each of √S apex bound treos in RC wave length. At each apex bound treo this one quanta load or S free treos is supported by equal number of S bound treos (kinetons) in √S layered sub kinetic coloumn (√S frequency).

BREAKING OF EM WAVE IN ENERGETIC GAMMA PHOTON

in which trough and crest breaks to form one pair of electron and positron

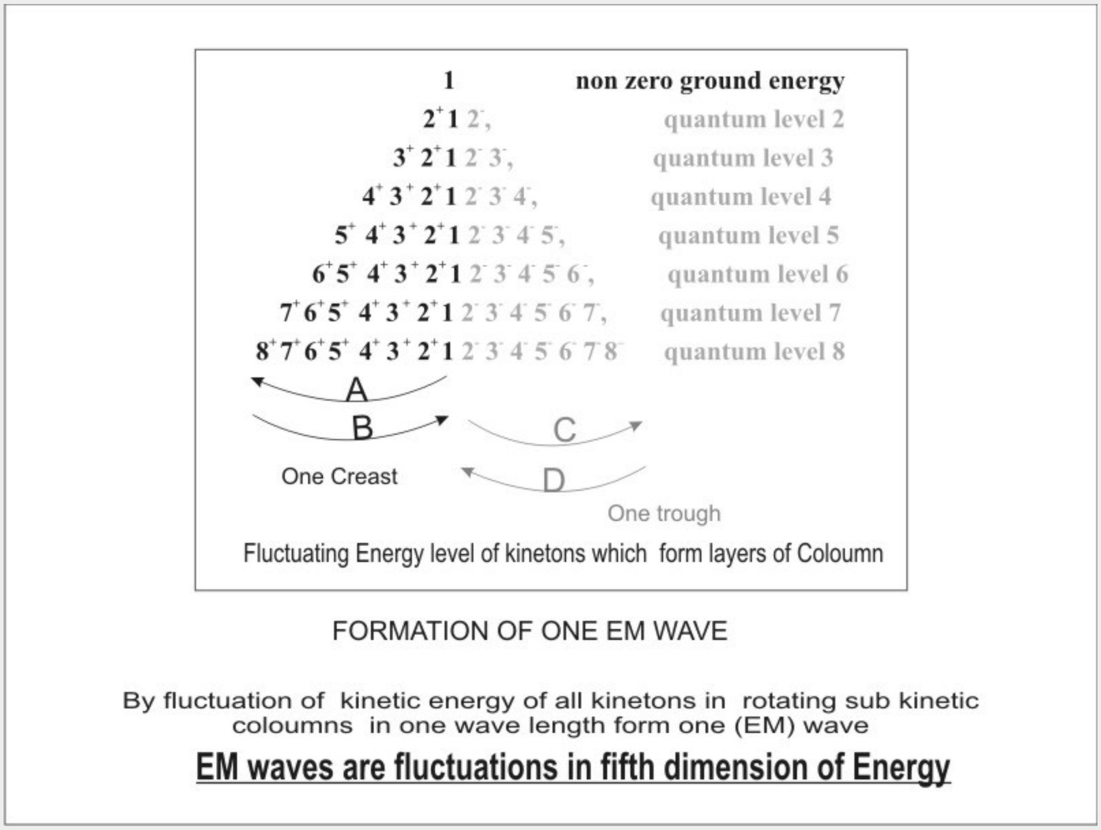
Each EM wave is a pendulum motion of its one quanta mass-energy in fifth positive dimension of space matrix, in .which the kinetic energy and potential energy of each bound treo in one sub kinetic coloumn on all apex bound treos in wave length fluctuates. These fluctuations are from its maximum kinetic energy point at the top of crest of EM wave, to maximum potential energy point at the bottom of its trough. (D.3.6 : + or – Swing of energy in kinetic coloumn)

The biggest possible gamma photon packet is of √S quanta mass energy .It exerts a uniform load of one quantum at each of √S apex bound treos in RC wave length.

Moving energetic gamma photon form one EM wave of $2\sqrt{S}$ apex bound treos length and continue to exert one quantum load on each apex bound treo. This load of S free treos or one quanta on each apex bound treo is supported by one sub kinetic coloumn made up of $\sqrt{S}$ kineton layers having equal number of ‘S kinetons’. $\sqrt{S}$ units ($hv_{\sqrt{S}}$) is the angular momentum of this photon packet (and all sub kinetic coloumns turn by 90° and direction of their vector changes from vertically up to horizontal) and it form $\sqrt{S}$ EM waves in one second.

These are critical maximum limits of first dimension. At this point when the angular momentum of $\sqrt{S}$ units or 90° in energetic gamma photon is achieved it breaks in two lobes, one on each side of base line. One lobe forms from crest and other lobe comes from trough of its one EM wave. The lobe formed by crest continue to move clockwise while the lobe formed by trough will continue to move anticlockwise. All $\sqrt{S}$ sub kinetic coloumns in trough part of one EM wave (negative energy half, below the base line) wrap around half mass energy of gamma photon to form one new electron. While the positron an anti particle is formed by wrapping of other $\sqrt{S}$ sub kinetic coloumns (from positive energy half of EM wave, above the base line forming crest) around other half mass energy of this gamma photon, which start rotating clockwise (D.3.7)

Each lobe will carry $\sqrt{S}$ quanta mass-energy and ½ h angular momentum. Due to direction of rotation of their respective rotating kinetic coloumns electron packet will have negative and positron will have positive charge.



By fluctuation of kinetic energy of all kinetons in rotating sub kinetic coloumns in one wave length form one (EM) wave

EM waves are fluctuations in fifth dimension of Energy

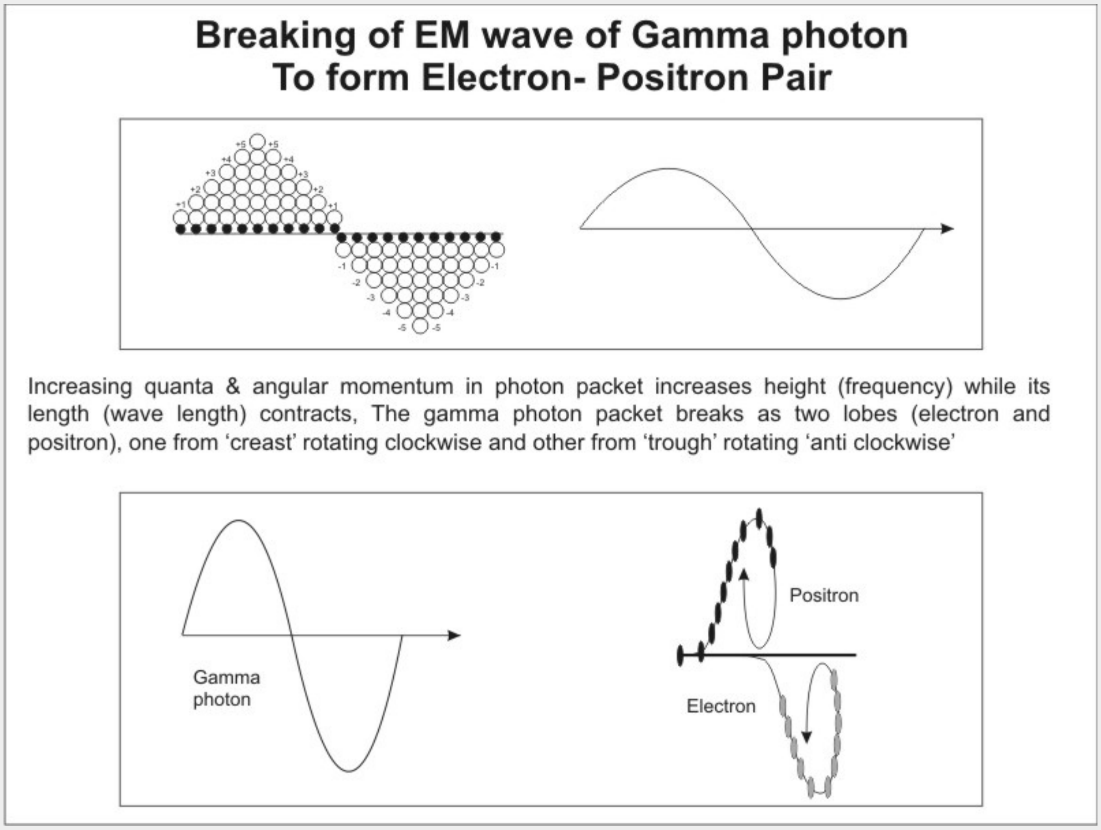
Diagram 3.7 : Fluctuations in fifth dimension of Energy to form EM waves

In the deformation of second dimension each of √S sub kinetic coloumns individually rotates on √S apex bound treos in wave length of unit electron to form √S orbitums (each orbitum has S kinetons) arranged vertically in √S RC wave length at first quantum level of this dimension. Each such orbitum rotates once per second to support one quanta mass-energy of S free treos in electron packet. All identical energy orbitums are arranged vertically one below the other collectively form one electron orbit.

Each lobe forming electron and positron will have 0.51 MeV ($1.439491604 \times 10^{64}$ free treos or √S quanta rest mass-energy) by division of one energetic gamma photon of 1.02 MeV ($2.87241041 \times 10^{64}$ free treos)[3]

The breaking of a photon packet is not new, as it can always shed or add its mass-energy in units of one quantum with increase or decrease of one or more layers from all sub kinetic coloumns present in wave length in this quantum universe. *This can be seen in photon- electron interactions in Compton scattering and in Raman scattering with resultant change in frequency of scattered photon when it strikes a molecule.*

The electromagnetic forces are exchange forces, which act by exchange of either full photons or few quanta mass energy (few layers of kinetic coloumn) from one photon packet. When photon interact with electrons and other elementary particles, atoms and molecules, the exchange of energy takes place by transfer of full layers (removal or addition) from all sub kinetic coloumns in wavelength and this explains the mechanism of all types of energy transfers as seen in thermal, chemical and bio chemical processes.



Breaking of EM wave of Gamma photon
To form Electron- Positron Pair

Increasing quanta & angular momentum in photon packet increases height (frequency) while its length (wave length) contracts, The gamma photon packet breaks as two lobes (electron and positron), one from 'creast' rotating clockwise and other from 'trough' rotating 'anti clockwise'

Diagram 3.8 : Trough and Crest Dividing in gamma photon

Materialization of Energy i.e. Formation of Matter Particles

The materialization of energy becomes compulsory when the load on each apex bound treo exceeds the limit of 'one quanta free treos'. More then this load can not be supported and propelled simultaneously at the speed of light.

Then the EM wave of gamma photon packet breaks along its wavelength, and unit electron thus produced, will also have one quantum mass-energy on each apex bound treo in its RC wave length.

In second dimension the mass-energy increases in units of one ‘unit electron mass’ at each of √S quantum level and forms all elementary particles. This increasing mass-energy in units of one ‘unit electron mass’ at each next quantum level is supported by increased one sub shell (layer) in all shells in RC wave length resulting in increased wrapping by deformed space-matrix at each next quantum level. Now with increased angular momentum by more then √S units (more then 90 degree) the vertical coloumns become horizontal and the wave pattern changes.

This wrapping of space-matrix as orbitums (S kinetons) around each quantum (S free Treos mass energy) is materialization of energy which forms all elementary particles (matter particles).This wrapped ‘mass-energy’ (free treos) as matter particle revolves anti clockwise in its respective orbit along with the rotation of its shells; while anti matter particles revolve clock wise.

Formation of one EM wave or one rotation of one orbitum is required to support its one quanta mass-energy for one second. Thus unit electron formed will rotate its √S quanta mass-energy by one rotation of √S orbitums per second.

Another compulsion for materialization of energy is that the mass energy of any elementary particle should remain stationary to be supported by its matter wave (for a period till all the shells in wave length successively vibrate once) and then it is propelled to next bound treo in its orbital path; unlike EM waves where each wave supports one quanta mass energy in any moving photon packet while it continue to move at the speed of light.

Annihilation (unwrapping) of Matter and Anti Matter

as they are wrapped by kinetic coloumns rotating in reverse directions

When equal mass energy Electron (rotating 'anti-clock wise') and Positron (rotating 'clock-wise'), rotating in two opposite directions come in contact with each other, their opposite deformations are unwrapped to annihilate each other. After loosing their particle and anti particle structure by this unwrapping their free treos mass energy is released as packets of 'photon'.

[Similar unwrapping of kinetic coloumns of elementary particles is also done by gravitational circular waves in gravitational spheres and unit black holes to churn the matter and thus it *generates Hawking radiation (pairs of free treos and voids as +ve and -ve energy pairs)*]

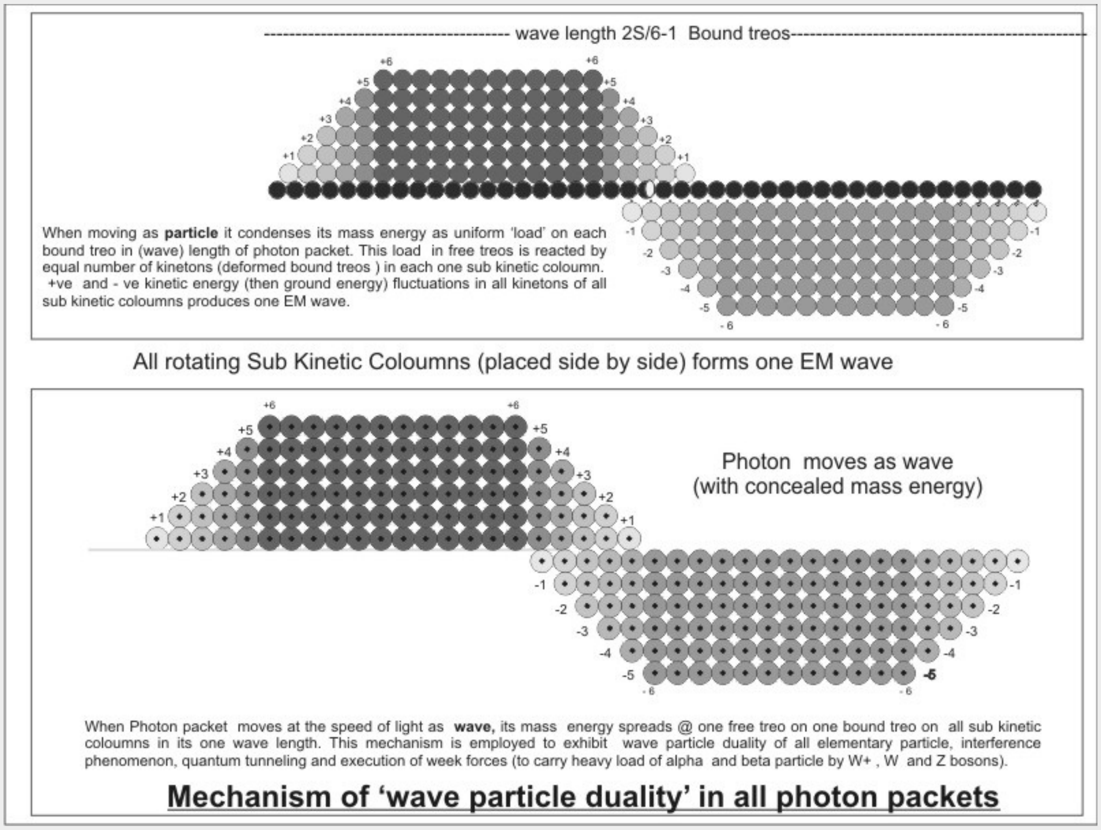
'Dualistic Nature' of Photon and Elementary particles

The photon packet moves at the speed of light by spreading its mass-energy on its supporting kinetic coloumns such that one free treo is supported by one kineton, (as they are always in equal number). Thus the photon conceals its mass-energy to move as 'mass less photon wave' at the speed of light. (D.3.9 : Mass less photon wave)

When photon is confined (.) it exhibits its particle nature with its condensed mass-energy along its RC wave length. Photon exhibiting ‘photo electric phenomenon’ behaves as particle and with sufficient momentum it energies (pushes) and displace free electrons on metal surface to produce electric current (Photo electric effect).

Similarly free treos mass energy in electron packet can also be distributed as one free treo on each one kineton of all supporting sub kinetic coloumns (shells) in its RC wavelength and then Electron packet can also move as a wave. Or these packets can condense its mass-energy on each apex bound treo in its RC wavelength as ‘electron or elementary particle. It can be compared with water where its wave nature is exhibited by its liquid form and its particle form is exhibited by an ice cube.

In this way these photons and elementary particles exhibit phenomenon of interference, quantum tunneling, and weak forces by W, Z bosons. These phenomenons are possible only when the photon packet and elementary particles while traveling in wave form spread their mass energy homogeneously on its wave in the manner described in the proposed model (it is indirect proof of this treo model).


-------------------------------------- wave length 2S/6-1 Bound treos--
+6
+5
+4
+3
+2
+1
-1
-2
-3
-4
-5
- 6
All rotating Sub Kinetic Coloumns (placed side by side) forms one EM wave
Photon moves as wave
(with concealed mass energy)
Mechanism of 'wave particle duality' in all photon packets

When moving as **particle** it condenses its mass energy as uniform 'load' on each bound treo in (wave) length of photon packet. This load in free treos is reacted by equal number of kinetons (deformed bound treos) in each one sub kinetic coloumn. +ve and - ve kinetic energy (then ground energy) fluctuations in all kinetons of all sub kinetic coloumns produces one EM wave.

When Photon packet moves at the speed of light as **wave,** its mass energy spreads @ one free treo on one bound treo on all sub kinetic coloumns in its one wave length. This mechanism is employed to exhibit wave particle duality of all elementary particle, interference phenomenon, quantum tunneling and execution of week forces (to carry heavy load of alpha and beta particle by W+ , W and Z bosons).

Diagram 3.9 : Photon a wave (one free treo riding on one bound treo) and particle

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1. Book, Universe is only space-time, John A. Macken 2012

2. According to the Maxwell theory the frequency v of classical radiation is equal to the rotation frequency υ_{rot} of the electron in its orbit, with harmonics at integer multiples of this frequency.

3. The particle and anti particle (pair) are generated by breaking of a common EM wave. Each particle and anti particle carries this information (about the typical deformation of space-matrix and typical breaking of wave at different phase, as its genetic code) with them, so they know how to behave later and thus integrated behavior of particle and antiparticle can be explained.

TWO DIMENSIONAL DEFORMATION -

CONTRACTION IN LENGTH AND BREADTH OF

UNIT SPACE-MATRIX

This chapter will explain :

Formation of Matter waves, What decides speed of rotation and revolution of any baby body (Electron or Planet) in orbit of parent body (atomic nucleus or Sun),

Formation of quarks and their condensation to form matter particles, Structure and formation of all atoms, Atomic forces and weak forces, Electricity and Magnetism.

Second dimensional deformation is gradually increasing contraction in two dimensions (length and breadth) of one unit Space-matrix to generate equal number of kinetons which can support the loads of S to S^2 free treos.

Key Parameters in Second Dimensional

Deformation of Unit Space-matrix

Number of quantum levels in second dimension = √S quantum levels.

Maximum mass energy supported in first dimension, serves as one unit of increment of mass energy for second dimension.

It is √S quanta mass energy, or mass energy of one unit electron, which increases one by one at each of √S quantum levels of second dimension.

Mass energy of elementary particle at any quantum level in this dimension = unit of increment in this dimension × number of this quantum level.

Mass-energy limits of second dimension are from minimum √S quanta in ‘one unit electron’ to maximum S quanta in ‘one unit mass’ (Planck mass).

Geometry of deformation = Shell, sub- shell and orbitum replaces sub kinetic coloumn, kineton layers and kinetons of first dimensional deformation.

Load exerted by mass energy (at its quantum level) per apex bound treo in its RC wave length = square of its quantum number, in terms of quanta. (e.g. mass energy of 5 unit electrons is accumulated at 5 th quantum level and it exert a load of 25 quanta on each apex bound treo in RC wave length)

Load = mass energy in packet / RC wave length.

To support this increased load of one unit electron at each next n^{th} quantum level (one sub-shell with 2n–1 orbitums are added in each shell of wave length)

Radius of deformation increases by √S bound treo layers which increases frequency by √S number and area of deformation increases accordingly.

Angular deformation = Angulation of all shells in wave length increases in second dimension from - 90º to 180º i.e. [90° + (quantum number / √S) × 90°]

Reduced Compton Wave length at any quantum level = Length of uniform spread of elementary particle packet on apex bound treos = Number of shells which supports this packet at each apex bound treo = S bound treos / number of quanta mass energy in elementary particle packet = (Mass energy at this quantum level / load)

Frequency = Number of quanta in elementary particle packet = Number of bound treo layers which are deformed in each shell = Total number of orbitums in all shells present in wave length = Number of bound treo distance the point mass travels in its orbit in one second in this matter wave = S / RC wave length.

Ground energy density at each point in second dimensional deformation = S kinetons which form one orbitum.

S^2 free treos or S quanta mass energy now named as 'one unit mass' is the maximum load, which can be supported at one apex bound treo, it is now one gravitational center of unit mass and it is identified as one graviton in this model. One unit mass of treo model on calculation is exactly equal to Planck mass = 2.16×10^{-8} Kg. This unit mass is the maximum limit which can be supported at one graviton by forming one full kinetic/ unit gravitational coloumn. Planck energy (1.956×10^9 J) is energy in one full kinetic / unit gravitational coloumn.

[It has been observed in this model, that Gravitons on all bound treos in one meter length collectively produce Planck force = 1.21 × 10^{44} N {1.956 × 10^9J (1/1.612 × 10^{-35}) } & gravitons on all bound treos in one meter cube generates Planck energy density = 4.632 × 10 ^{113} J m^3 {1.956 × 10^9 (1/1.612 × $10^{-35})^3$ }

Thus on calculation energy of S gravitons (which form one electron black hole) = 3.62838 × 10^{52} J and the kinetic energy of S^2 Gravitons at the gravitational center of unit black hole = 6.730 × 10^{95} J]

Basis of formation of Matter Wave

The geometry of deformation changes in second dimension where, sub kinetic coloumns, 'layers in each sub kinetic coloumn' and kinetons of first dimension are replaced by shells, sub shells and orbitums respectively.

Orbitum [1] - A new term used in this treo model, one orbitum (made up of S kinetons) replaces one kineton of first dimension.

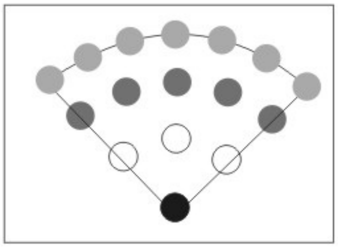
In first dimensional deformation each one quanta mass energy of photon packet was supported for one second by one EM wave formed by all sub kinetic coloumns in its one wave length (where each sub kinetic coloumn supports its photon packet density) and to support n quanta mass energy photon packet n EM waves are formed in one second. While in second dimensional deformation one biggest sub kinetic coloumn of first dimension rotates at its one apex bound treo by 360° to form one orbitum which supports one quanta mass energy by its one rotation in one second.

Each one quanta or S free treo mass energy is supported for one second by equal number of S bound treos by S vibrations of each bound treo per second i.e. one free treo is supported by one bound treo by its one vibration for one Planck's least time.

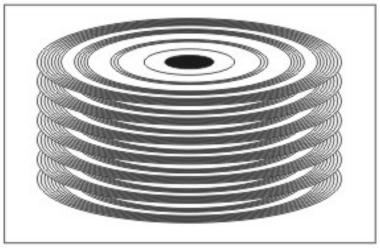
One EM wave forms by rotation of all S / n sub kinetic coloumns (total S layers in each sub kinetic coloumns) in wavelength which all vibrates once, one by one by S / n vibrations in any photon packet to support one quanta load of photon packet. But in second dimensional deformation each one √S layered sub kinetic coloumn (S kinetons) by its rotation turns into one orbitum which support one quanta 'load' individually. All orbitums of identical energies are arranged one over other in sub shells of all shells (one shell on one apex bound treo) in wave length, the identical orbitums one over other join together to form one orbit e.g . in √S RC wave length of unit electron √S orbitums collectively form one orbit.

EM waves can only form successively when the frequency is less then its wave length as in first dimension. Thus the maximum limit of mass energy which can be supported in one second is √S quanta mass energy with √S frequency and √S RC wave length and it successively forms √S EM waves in one second. While in second dimension multiple quanta load of elementary particle (frequency more then its wave length) is now supported by simultaneous rotations of multiple orbitums per second, at their different rotational speed in each sub shell. [2]

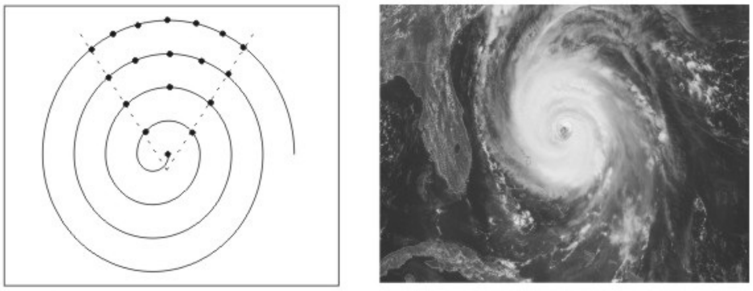
For each one quanta mass energy in photon packet, one EM wave form in one second in first dimension while one orbitum forms in second dimension. To support S quanta mass-energy of one 'unit mass' at one Graviton, all S number of orbitums rotate once in one second. Total S orbitums are present in √S matter waves which together form one supporting 'full kinetic /unit gravitational coloumn'.



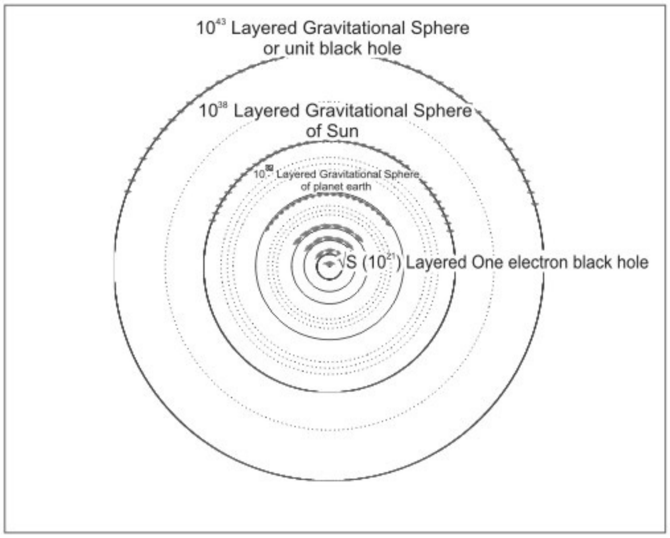
2n -1 Kinetons in first dimension in n th layer of each sub kinetic coloumn in wave length



2n-1 Orbitums in second dimension in n th subshell of each shell in wave length



2n -1 Gravitons in third dimension, at n th quantum level (circle) in wave of 'electron black hole'


10^{43} Layered Gravitational Sphere or unit black hole
10^{38} Layered Gravitational Sphere of Sun
10[illegible] Layered Gravitational Sphere of planet earth
$\sqrt{S}\,(10^{21})$ Layered One electron black hole

2n- I 'Electron black holes' in fourth dimension at n th quantum level in 'gravitational sphere' of cosmic bodies

Changing Geometry of deformation in four dimensions of space time

Diagram 3.10 Changing geometry of kinetic coloumns in each dimension

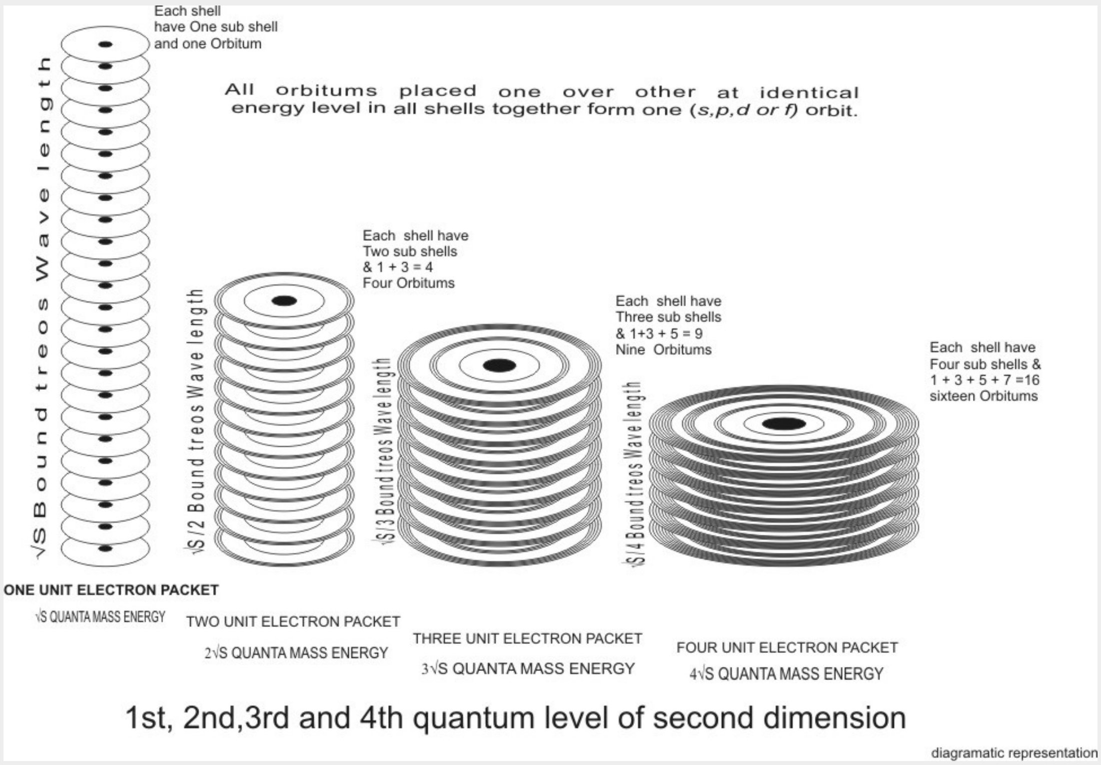

Each shell have One sub shell and one Orbitum
All orbitums placed one over other at identical energy level in all shells together form one (s,p,d or f) orbit.
√S Bound treos Wave length
Each shell have Two sub shells & 1 + 3 = 4 Four Orbitums
√S/2 Bound treos Wave length
Each shell have Three sub shells & 1+3 + 5 = 9 Nine Orbitums
√S/3 Bound treos Wave length
Each shell have Four sub shells & 1 + 3 + 5 + 7 =16 sixteen Orbitums
√S/4 Bound treos Wave length
ONE UNIT ELECTRON PACKET
√S QUANTA MASS ENERGY
TWO UNIT ELECTRON PACKET
2√S QUANTA MASS ENERGY
THREE UNIT ELECTRON PACKET
3√S QUANTA MASS ENERGY
FOUR UNIT ELECTRON PACKET
4√S QUANTA MASS ENERGY
1st, 2nd,3rd and 4th quantum level of second dimension
diagramatic representation

Diagram 3.11 increasing one unit electron mass-energy at four quantum levels of second dimension.

In second dimension the energy (mass or momentum) of electron and in all other elementary particles, increases in the units of one electron mass (of √S quanta mass-energy) at each of √S quantum levels. It becomes 1√S quanta at first quantum level, 2√S quanta at second quantum level, 3√S quanta, 4√S quanta, 5√S quanta and so on……. maximum up to S quanta at last quantum level and thus it support all ‘energetic electrons’ and ‘elementary particles’ nucleons, atoms and molecules.

With increasing mass by ‘one electron mass’ at each next quantum level and correspondingly reduced RC wavelength, the ‘packet density’ and ‘load’ increases by quanta square as 1quanta, 4 quanta, 9 quanta, 16 quanta, 25 quanta and so on up to S quanta (one unit mass) at each apex bound treo in its RC wavelength.

To support each quanta ‘load’ (of 1, 4, 9, 16 quanta and so on.....up to S quanta) equal number of orbitums which rotate once in one second (at phase velocity of matter wave) are arranged according to proposed coloumn geometry with 1, 3 , 5, 7 ... orbitums in 1st, 2nd, 3rd and 4th sub shells.... respectively. One new sub shell made up of $\sqrt{S}$ bound treo layers is added (frequency increases by $\sqrt{S}$) at each next quantum level in each shell and proportionately increases the area of deformation of all shells present in wave length.

Each shell vibrates as one unit, one by one with each vibration from top to bottom while elementary particle itself will rotate once by all these vibrations. After completing its one rotation by which the elementary particle is supported for one Planck’s least time, the elementary particle behaves as weight lass ‘point mass’ and is pushed to next bound treo in its orbital path of its revolution. Thus it revolves by number of bound treos distance per second which is equal to its frequency (this decides group velocity of matter wave).

Increasing mass-energy, decreasing wavelength and increasing ‘electron packet density’ and ‘load’ at each next quantum level in second dimensional deformation

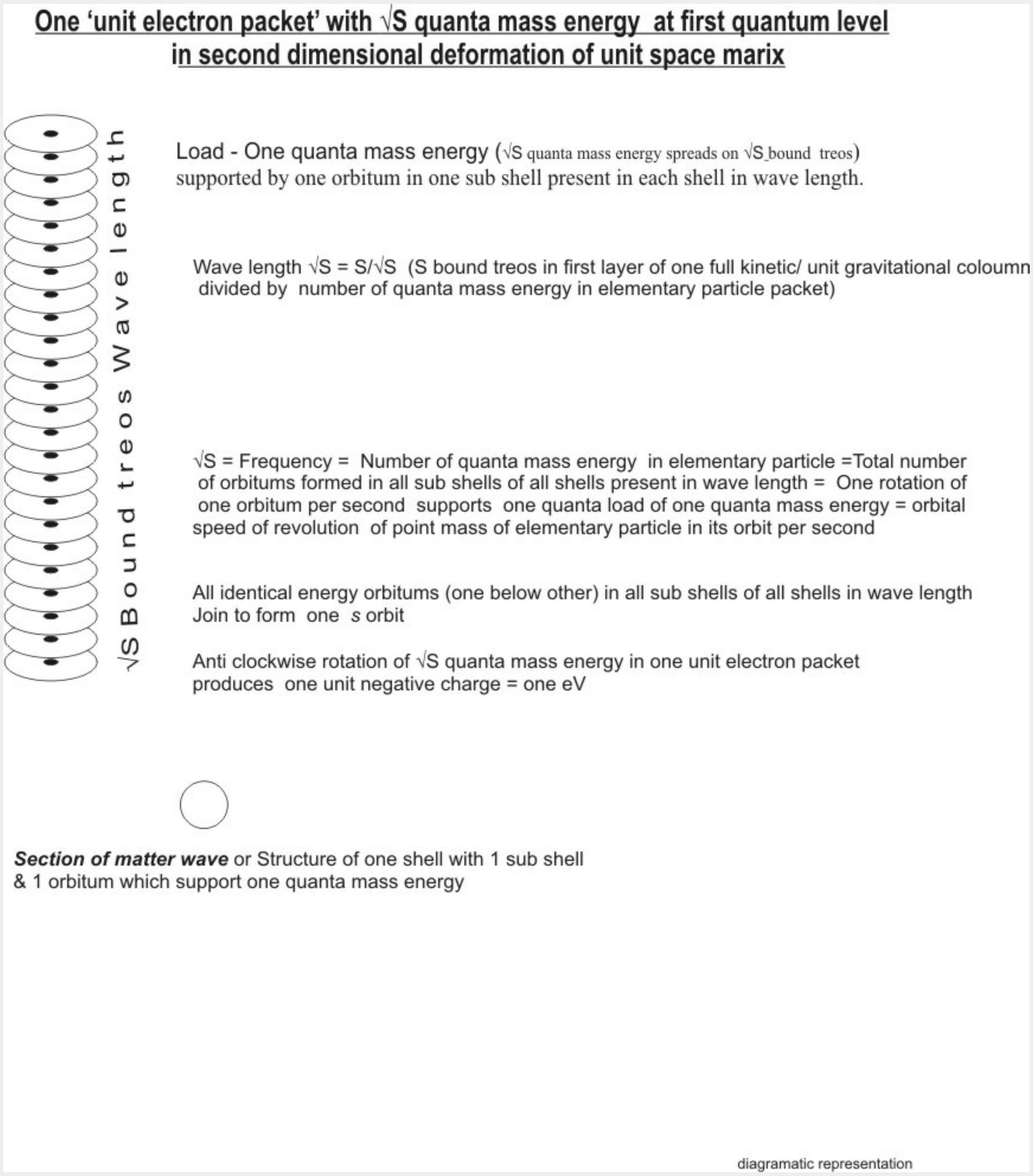
Mass-energy increases by one unit electron mass-energy at each of $\sqrt{S}$ quantum level of second dimension, with proportionately decreasing wavelength (S bound treo / n quanta mass energy in packet) and increasing frequency by $\sqrt{S}$, with the addition of one sub shells ($\sqrt{S}$ bound treo layers) at each quantum level, while its load increases in quanta by square of quantum number.

Wavelength of any elementary particle = S bound treos / Number of quanta mass-energy in elementary particle packet

Wave length of matter wave at any quantum level = wavelength at first quantum level / quantum Number = $\sqrt{S}$ / quantum number

Packet of ‘one electron mass’ has$\sqrt{S}$ quanta mass-energy (or $\sqrt{S} \times S$ free treos) which spreads on its RC wavelength of $\sqrt{S}$ bound treos and it exerts one quantum load on each of $\sqrt{S}$ apex bound treos. (D.3.12).

When it becomes a packet of ‘two unit electron masses’ with $2 \times \sqrt{S}$ quanta mass energy packet its wavelength reduces to half i.e. $\sqrt{S}/2$ bound treos. With double the mass-energy on half wavelength the packet density and load increases at second quantum level by square of quanta, and it becomes 4 quanta $(2)^2$



One 'unit electron packet' with $\sqrt{S}$ quanta mass energy at first quantum level in second dimensional deformation of unit space marix

Load - One quanta mass energy ($\sqrt{S}$ quanta mass energy spreads on $\sqrt{S}$ bound treos) supported by one orbitum in one sub shell present in each shell in wave length.

Wave length $\sqrt{S} = S/\sqrt{S}$ (S bound treos in first layer of one full kinetic/ unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet)

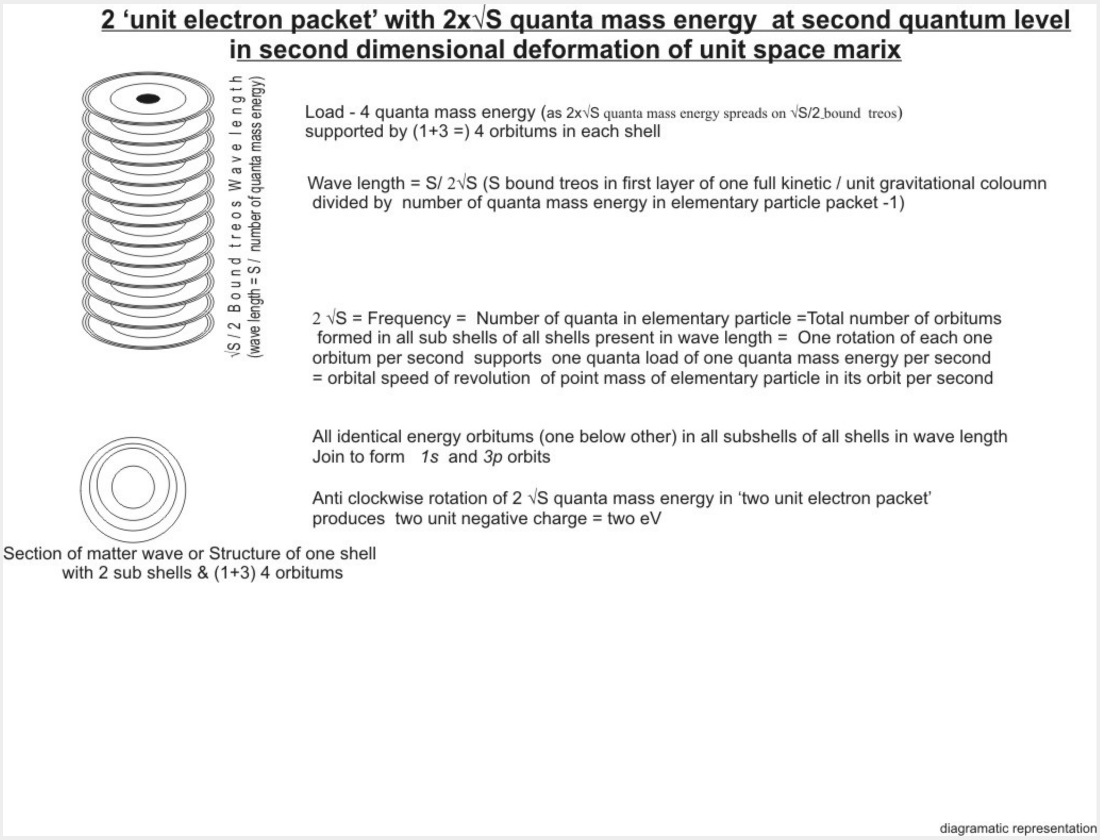
$\sqrt{S}$ = Frequency = Number of quanta mass energy in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of one orbitum per second supports one quanta load of one quanta mass energy = orbital speed of revolution of point mass of elementary particle in its orbit per second

All identical energy orbitums (one below other) in all sub shells of all shells in wave length Join to form one *s* orbit

Anti clockwise rotation of $\sqrt{S}$ quanta mass energy in one unit electron packet produces one unit negative charge = one eV

Section of matter wave or Structure of one shell with 1 sub shell & 1 orbitum which support one quanta mass energy

Diagram 3.12: One unit electron mass-energy at first quantum level



2 'unit electron packet' with 2x√S quanta mass energy at second quantum level in second dimensional deformation of unit space marix

√S/2 Bound treos Wave length
(wave length = S / number of quanta mass energy)

Load - 4 quanta mass energy (as 2x√S quanta mass energy spreads on √S/2 bound treos)
supported by (1+3 =) 4 orbitums in each shell

Wave length = S/ 2√S (S bound treos in first layer of one full kinetic / unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet -1)

2 √S = Frequency = Number of quanta in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of each one orbitum per second supports one quanta load of one quanta mass energy per second = orbital speed of revolution of point mass of elementary particle in its orbit per second

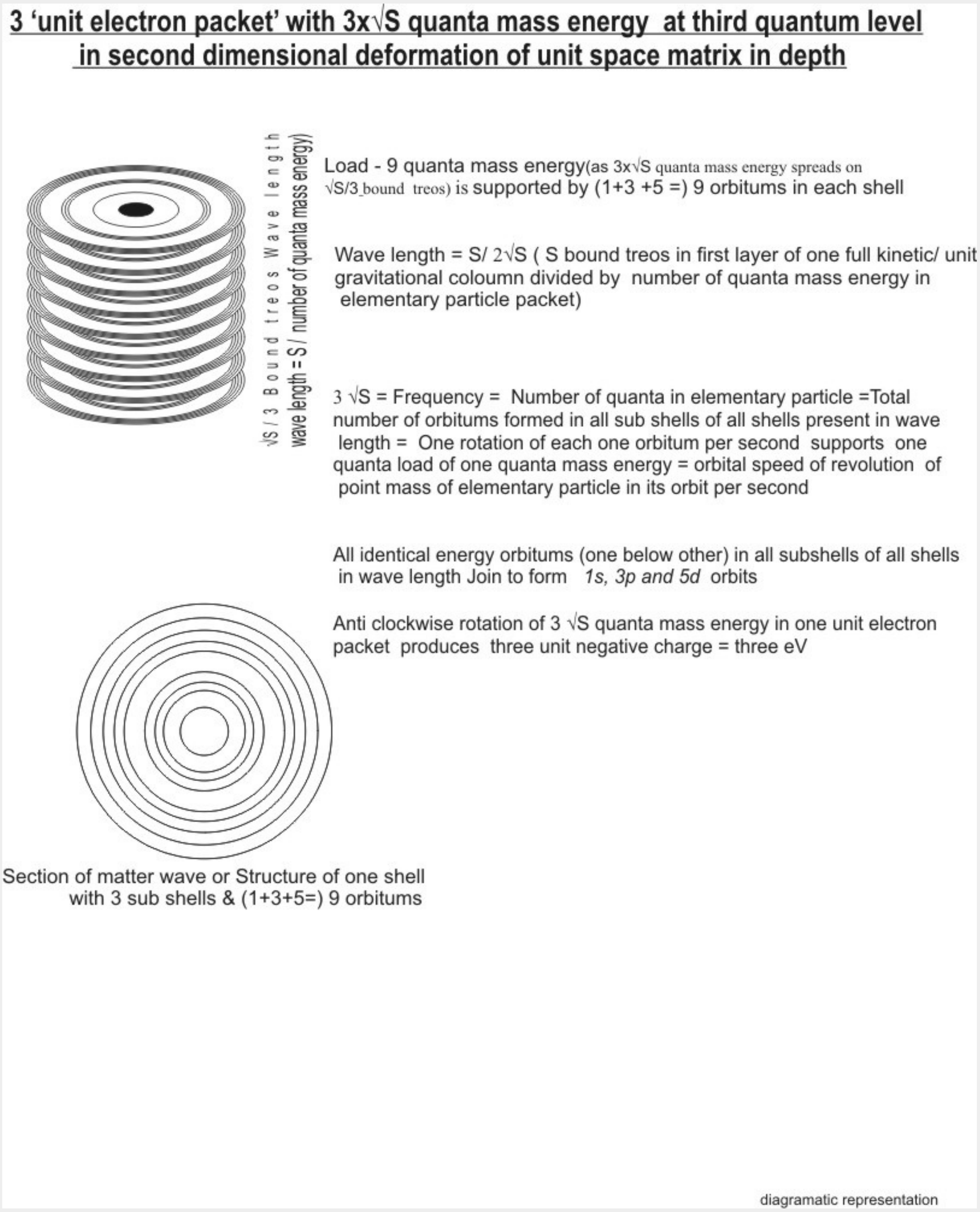
All identical energy orbitums (one below other) in all subshells of all shells in wave length Join to form *1s* and *3p* orbits

Anti clockwise rotation of 2 √S quanta mass energy in 'two unit electron packet' produces two unit negative charge = two eV

Section of matter wave or Structure of one shell
with 2 sub shells & (1+3) 4 orbitums

diagramatic representation

Diagram 3.13: Two unit electron mass-energy at first quantum level


√S / 3 Bound treos Wave length
wave length = S / number of quanta mass energy)
diagramatic representation

3 ‘unit electron packet’ with 3x√S quanta mass energy at third quantum level in second dimensional deformation of unit space matrix in depth

Load - 9 quanta mass energy(as 3x√S quanta mass energy spreads on √S/3 bound treos) is supported by (1+3 +5 =) 9 orbitums in each shell

Wave length = S/ 2√S (S bound treos in first layer of one full kinetic/ unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet)

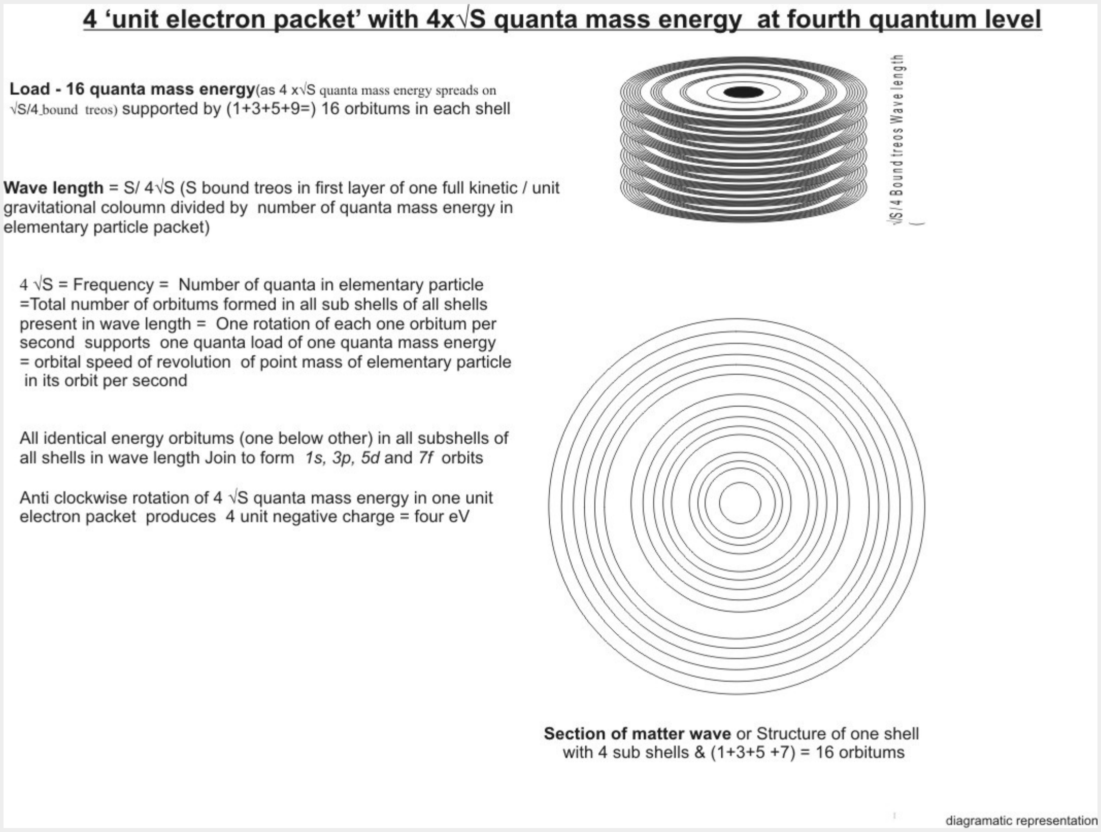
3 √S = Frequency = Number of quanta in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of each one orbitum per second supports one quanta load of one quanta mass energy = orbital speed of revolution of point mass of elementary particle in its orbit per second

All identical energy orbitums (one below other) in all subshells of all shells in wave length Join to form *1s, 3p and 5d* orbits

Anti clockwise rotation of 3 √S quanta mass energy in one unit electron packet produces three unit negative charge = three eV

Section of matter wave or Structure of one shell with 3 sub shells & (1+3+5=) 9 orbitums

Diagram 3.14: Three unit electron mass-energy at first quantum level



4 'unit electron packet' with 4x√S quanta mass energy at fourth quantum level

Load - 16 quanta mass energy(as 4 x√S quanta mass energy spreads on √S/4 bound treos) supported by (1+3+5+9=) 16 orbitums in each shell

Wave length = S/ 4√S (S bound treos in first layer of one full kinetic / unit gravitational coloumn divided by number of quanta mass energy in elementary particle packet)

4 √S = Frequency = Number of quanta in elementary particle =Total number of orbitums formed in all sub shells of all shells present in wave length = One rotation of each one orbitum per second supports one quanta load of one quanta mass energy = orbital speed of revolution of point mass of elementary particle in its orbit per second

All identical energy orbitums (one below other) in all subshells of all shells in wave length Join to form *1s, 3p, 5d* and *7f* orbits

Anti clockwise rotation of 4 √S quanta mass energy in one unit electron packet produces 4 unit negative charge = four eV

Section of matter wave or Structure of one shell with 4 sub shells & (1+3+5 +7) = 16 orbitums

Diagram 3.15: Four unit electron mass-energy at first quantum level

For 'three unit electron mass packet' (3 × √S quanta 'free treos') at third quantum level the wavelength will be √S/3 bound treos and 9 quanta load, and so on.. (D.3.14).

Finally at √S quantum level; √S × √S quanta mass energy packet (or S quanta or S^2 free treos or one unit mass), has only 1 bound treo as its wavelength [S bound treos / S quanta]. On this one bound treo or 'one unit gravitational center' (which is named as graviton in the treo model) there is one 'full kinetic /unit gravitational coloumn' to support the load of 'one unit mass'.

With reducing wavelengths from √S apex bound treo of a unit electron to 1 apex bound treo of ‘one unit mass’, the mass packets of all elementary particles contract in length and get spread on lesser number of bigger shells placed vertically in depth in its wavelength. These shells are formed in depth from equal number of sheets of ‘one unit space-matrix’ in which the area of deformation increases gradually, with increasing radius of shells by √S bound treo layers at each next quantum level.

With one shell formed in one sheet, the wavelength involves √S sheets one over other in depth at first quantum level, for one electron mass of √S quanta. The wavelength gradually reduces, with reducing number of shells formed from equal number of sheets at each next quantum level, finally for S quanta mass energy of one unit mass the wave length reduces to one at last √S th quantum level and involves one full last sheet of unit space matrix to support one ‘unit mass’ at its one ‘unit gravitational center’ i.e. on one Graviton by one full kinetic/ unit gravitational coloumn.

Thus in total it involves all S sheets; with the gradually increasing area of deformation of these sheets at each of √S quantum levels (in depth) in this second dimensional deformation. (D.3.21)

Quantum Levels in an Atom

Increasing second dimensional deformation by addition of ‘one unit electron mass’ one by one at each next quantum level in second dimension

First quantum level : √S quanta mass-energy in one ‘unit electron packet’ exerts ‘one quantum load’ at each of √S apex bound treos in its wavelength. Which is supported by vertically placed √S shells (one shell on one apex bound treo). At first quantum level each such shell is made up of, one sub shell of √S bound treo layers which together form one orbitum of S deformed bound treos (S kinetons).

Second quantum level : 2 × √S quanta mass-energy in ‘two unit electron packet’ exert 4 quanta ‘load’ (its packet density) on each of √S/2 apex bound treo in its RC wave length. Here each of √S/2 shells formed on each apex bound treo, has two sub shells with 1 orbitum in first sub shell, and 3 orbitums in second sub shell.

Area deformed

First sub shell with one orbitum has √S bound treo radius, while second sub shell with all its 3 orbitums has 2 × √S radius. All 4 orbitums are formed from 4 S kinetons (4 quanta kinetic energy) present in total area of each shell of 2√S radius.

Energy and load distribution

At this second quantum level the energy in its first sub shell (K energy level) is 4 quanta, while in second sub shell (L energy level) energy is 1 quantum. (load / total number of orbitums upto this sub shell i.e 4/ 4 =1)

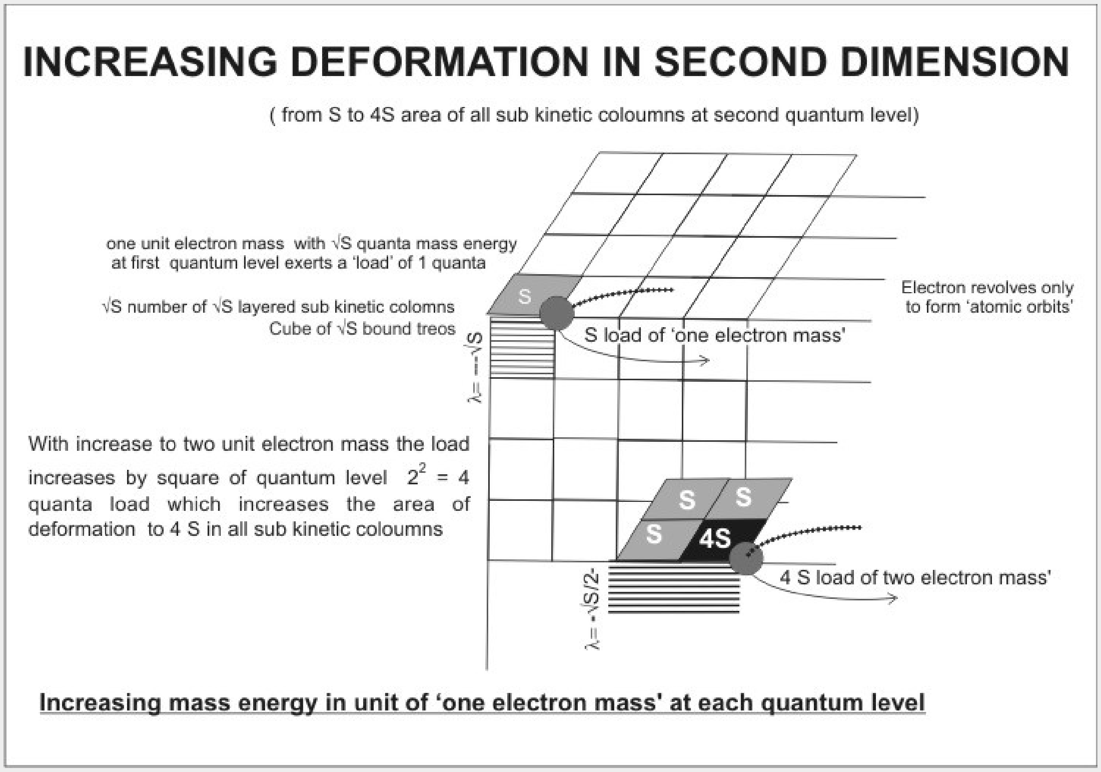
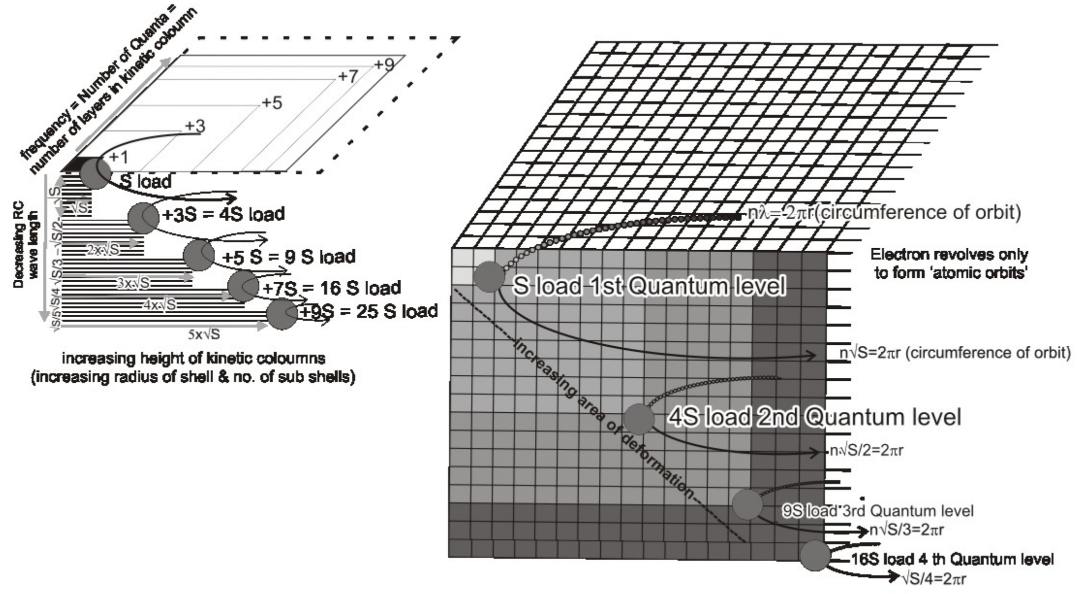

INCREASING DEFORMATION IN SECOND DIMENSION
(from S to 4S area of all sub kinetic coloumns at second quantum level)
one unit electron mass with √S quanta mass energy at first quantum level exerts a 'load' of 1 quanta
√S number of √S layered sub kinetic colomns
Cube of √S bound treos
S
S load of 'one electron mass'
Electron revolves only to form 'atomic orbits'
λ= ---√S
With increase to two unit electron mass the load increases by square of quantum level 2² = 4 quanta load which increases the area of deformation to 4 S in all sub kinetic coloumns
S
S
S
4S
4 S load of two electron mass'
λ= -√S/2-
Increasing mass energy in unit of 'one electron mass' at each quantum level

Diagram 3.16 : Two unit electron mass packet (with half wave length) have 4 quanta load and 1+4 orbitum occupy 4S bound treos at second quantum level

IN THE DEFORMATION OF SECOND DIMENSION MASS ENERGY OF ELEMENTARY PARTICLE PACKET INCREASES IN UNIT OF 'ONE ELECTRON MASS'


frequency = Number of Quanta = number of layers in kinetic coloumn
+1
+3
+5
+7
+9
S load
+3S = 4S load
+5 S = 9 S load
+7S = 16 S load
+9S = 25 S load
Decreasing RC wave length
√S
√S/2
√S/3
√S/4
√S/5
2x√S
3x√S
4x√S
5x√S
increasing height of kinetic coloumns
(increasing radius of shell & no. of sub shells)
nλ=2πr(circumference of orbit)
Electron revolves only to form 'atomic orbits'
S load 1st Quantum level
n√S=2πr (circumference of orbit)
Increasing area of deformation
4S load 2nd Quantum level
n√S/2=2πr
9S load 3rd Quantum level
n√S/3=2πr
16S load 4 th Quantum level
√S/4=2πr

Increasing mass energy in elementary particle packet, along with its decreasing wave length (i.e. contraction of packet in length), the 'load' increases in square of quantum level (from S to 4S, 9S, 16S.. and so on, up to S x S of a unit mass) and is supported by increased area of deformation (bigger kinetic coloumns = increased compton frequency= number of quanta as mass energy in packet) on decreasing number of sheaths in depth (2S/n-1 quanta mass energy = decreasing reduced compton wave length).

Diagram 3.17 (a) & (b) : First, second, third and fourth quantum level

Third quantum level : 3 × √S quanta mass-energy in 'three unit electron packet' exert 9 quanta load. This 9 quanta load on √S /3 apex bound treos is supported by vertically placed √S /3 shells in its reduced Compton wavelength. Each shell have three sub shells, with 1 orbitum in first sub shell, 3 orbitums in second sub shell and 5 orbitums in third sub shell (1+3+5= total 9 orbitums).

The first sub shell with one orbitum has √S bound treo radius; second sub shell with 3 orbitums has 2 × √S bound treo radius and third sub shell with 5 orbitums has 3 × √S bound treo radius. The kinetons in total area of 3√S radius of each shell of third quantum level are 9 S kinetons [approximate area of such elliptical shell = 9 S ($\pi r^2 = 3.12 \times 3S$)]. Kinetic energy In first sub shell (K energy level) it is 9 quanta, while in 3 orbits in second sub shell (L energy level) it is 9/ 4 quanta and in 5 orbits in third sub shell (M energy level) it is 1 quantum (9/9 quanta). (D.3.14 and D.3.27).

Fourth quantum level : similarly $4 \times \sqrt{S}$ quanta mass-energy of a four unit electron packet at 4 th quantum level exerts 16 quanta load. This 16 quanta load at $\sqrt{S}/4$ apex bound treos in its RC wave length is supported by $\sqrt{S}/4$ shells placed vertically (one on other). Each shell have four sub shells with 1 orbitum in first sub shell, 3 orbitums in second sub shell, 5 orbitums in third sub shell and 7 orbitums in fourth sub shell.

Thus in second dimensional deformation increasing ‘load’ from one quantum of one unit Electron mass packet, up to maximum of S quanta of one unit mass (and in between, the load exerted by all type of elementary particle packets, nucleons and atoms) is supported on decreasing number of shells present on its proportionately decreasing wavelength at each next quantum level till it reduces to just one bound treo (S bound treos / S quanta) for ‘one unit mass’ of S quanta mass energy

Increasing area of deformation in second dimensional deformation

At its first quantum level each shell is made up of, one sub shell of $\sqrt{S}$ bound treo layers which together form one orbitum of S deformed bound treos (S kinetons). The area occupied by its single $\sqrt{S}$ layered sub kinetic coloumn is S kinetons. One shell formed by this rotating sub kinetic coloumn involves 3S bound treos area (πr^2) in its one rotation along its Compton wave length.

In case of any elementary particle, n^2 is the area of one 'n' layered sub kinetic coloumn, thus each sub kinetic coloumn of n radius, rotates in πn^2 area of complete one shell (here n is any integral number and π is half angular momentum of wave, while another half angular momentum of wave is already consumed by its anti particle).

Radius of shells increases by √S bound treo layers at each next quantum level.

At first quantum level each shell (with one orbitum in one sub shell) in RC wave length of 'unit electron' is formed by one rotating sub kinetic coloumn of √S kineton layers which has S kinetons in deformed area.

At second quantum level for two unit electron masses (2√S quanta) the area of 2√S layered rotating sub kinetic coloumn, which form one shell, becomes four times or 4 S [$(2\sqrt{S})^2$] by which it support four quanta load by forming 4 orbitums from 4S kinetons. Here each shell has two sub shells and 4 (= 1+3) orbitums as per coloumn geometry. (D.3.11)

Each shell of 'three unit electron masses' (3√S quanta) with its 3√S bound treos radius (each rotating sub kinetic coloumn which form one shell have 3√S bound treo layers) have three sub shells, in which 9 (= 1 + 3 + 5) orbitums are formed from this 9S bound treos area.

At fourth quantum level to support 'four unit electron masses' (4√S quanta mass energy) there are √S/4 number of shells in its reduced Compton wavelength. Where each shell with 4 × √S bound treo radius has 16 (= 1 + 3 + 5 + 7) orbitums arranged in four sub shells.

In the deformation produced for 4 unit electron mass body, the kinetic energy levels in each shell are as follows ---- at its 1 st sub shell (K energy level) it has16 quanta kinetons energy, while in 3 orbitums in second sub shell (L energy level) it is 16/4 quanta, in 5 orbits in third sub shell (M energy level) it is 16/9 quanta and in 7 orbits in third sub shell (N energy level) it is 16/16 or just1 quanta. These K, (K,L) (K,L,M) and (K,L, M, N energy) levels are formed at 1 to 4 quantum levels.

And so on…till one ‘unit mass’ of ‘√S unit electron mass-energy’ forms one biggest shell, on its one bound treo RC wavelength. This biggest shell will have √S sub shells and S orbitums in total S bound treos radius. This shell involves one full last sheet of ‘unit space-matrix’ having S^2 bound treos.

Quantum levels of Elementary particles (and Planetary orbits)

(√S) i.e. 10^{21} bound treo layered 10^{22} shells at 1st quantum level for 10^{21} quanta i.e. √S quanta mass-energy (in ‘one unit Electron’)

At first quantum level of second dimensional deformation ‘unit electron’ of 10^{21} quanta mass-energy has total 10^{64} free treos ($10^{64} = 10^{21}$quanta × 10^{43} free treos in one quanta) in it’s packet and is supported by equal number of kinetons (deformed bound treos), is due to formation of 10^{22} shells (from 10^{22}sheets) in depth of a unit space-matrix. Thus all 10^{22} shells each made up of 10^{21} bound treo layered coloumn have total 10^{64} kinetons.[$10^{22} \times (10^{21})^{2} = 10^{64}$ kinetons]

(In present model, S = 1.855×10^{43} , and S free treos = one quanta mass energy, while √S is 4.32×10^{21}, but for simplicity of calculation here S = 10^{43} and √S = 10^{21} are used)g electron can increase its load due to its increased momentum (increased number of kinetons from its bigger kinetic coloumns which are added to its rest mass energy) in units of one quanta to $\sqrt{S}$ quanta (i.e. in integral multiple of S number of free treos) and then the energetic electron will jump from one quantum level to higher quantum level (which ever matches with its changed mass and load, normally one quantum level above or one below) or vice-versa it can shed the excess energy as one discharged photon packet (of matching quanta) and electron will jump to lower quantum level.

10^{22} bound treo layered, 10^{21} shells are formed at 10th quantum level for 10^{22} quanta mass (10 unit electrons mass energy)

With the formation of 10^{21} shells in next 10^{21}sheets in depth, where each shell is of 10^{22} bound treo layered coloumn, supports 10^{65} free treos in packet by equal number of 10^{65} kinetons [$(10^{22})^{2} \times 10^{21} = 10^{65}$ kinetons].

10^{23} bound treo layered 10^{20} shells are formed at 100 th quantum level for 10^{23} quanta mass (in 100 unit electrons mass energy)

With the formation of 10^{20} shells in 10^{20} sheets in depth of one unit space-matrix, where each shell is formed by one 10^{23} bound treo layered coloumn, the load supported is 10^{66} free treos by equal number of bound treos present in each of 10^{20} shells [$(10^{23})^{2} \times 10^{20} = 10^{66}$ kinetons].

10^{24} bound treo layered,10^{19} shells are formed at 1000 th quantum level for 10^{24} quanta mass energy (in 1,000 unit electrons)

With the formation of 10^{19} shells in 10^{19} sheets and with formation of one 10^{24} bound treo layered coloumn in each shell the load supported is 10^{67} free treos (of one proton equal to 1836 unit electron masses) by equal number of kinetons [$(10^{24})^2 \times 10^{19} = 10^{67}$ kinetons].

10^{25} bound treo layered 10^{18} shells are formed at 10000 th quantum level for 10^{25} quanta mass (for 10,000 unit electrons mass energy or for elements of 10 nucleons in atom)

With the formation of 10^{18} shells in 10^{18} sheets and with formation of one 10^{25} bound treo layered coloumn in each shell, the total mass of 10^{68} free treos is supported by equal [$(10^{25})^2 \times 10^{18} =$]10^{68} kinetons.

10^{26} bound treo layered 10^{17} shells are formed at 100,000 th quantum level for 10^{26} quanta mass (in 100,000 unit Electrons mass energy or for elements of 100 nucleons in atom)

With the formation of 10^{17} shells in 10^{17} sheets and with formation of one 10^{26} bound treo layered coloumn in each shell, the total load supported is 10^{69} free treos (of hundred neutron or protons in atom) by equal number of total kinetons [$(10^{26})^2 \times 10^{17} = 10^{69}$ kinetons].

10^{27} layered sub kinetic coloumns at 1million th quantum level for 10^{27} quanta mass (in one million unit Electrons mass energy), formation of W, Z bosons of weak forces.

With the formation of 10^{16} shells in 10^{16} sheets and with formation of one 10^{27} bound treo layered coloumn in 10^{16} shells, the total load supported is 10^{70} free treos (of W and Z bosons) by equal number of total kinetons [$(10^{27})^2 \times 10^{16} = 10^{70}$ kinetons].

Here 10^{16} bound treos distance occupied by 10^{16} shells (10^{-17} centimeter), this wavelength of w & z bosons is equal to its 'range of action' of these bosons of weak forces.

We can now jump to

10^{39} layered sub kinetic coloumns which are formed at ($10^{21} \times 10^{18}$) 10^{18} th quantum level to support 10^{39} quanta load. (the same is diluted mass pressure of Sun in orbit of Mercury)

With the formation of 10^4 shells and 10^{39} layered one coloumn in each shell, the total 10^{82} free treos mass energy or 10^{39} quanta diluted mass pressure of Sun, is supported by equal number of total 10^{82} kinetons [$(10^{39})^2 \times 10^4 = 10^{82}$] present in all shells which are formed at this quantum level of second dimension.

At 10^4 th quantum level of gravitational field of Sun (i.e. is same as 10^{18} th quantum level of second dimensional deformation) the orbit of Mercury is formed as 10^{38} similar deformations join together to form this orbit of mercury in gravitational field of Sun. Sun is a body made up of 10^{38} unit masses. All other planetary orbits are also formed at ten quantum levels from $10^{4\text{ th}}$ to $10^{5\text{ th}}$ quantum level in gravitational field of Sun in the same manner.

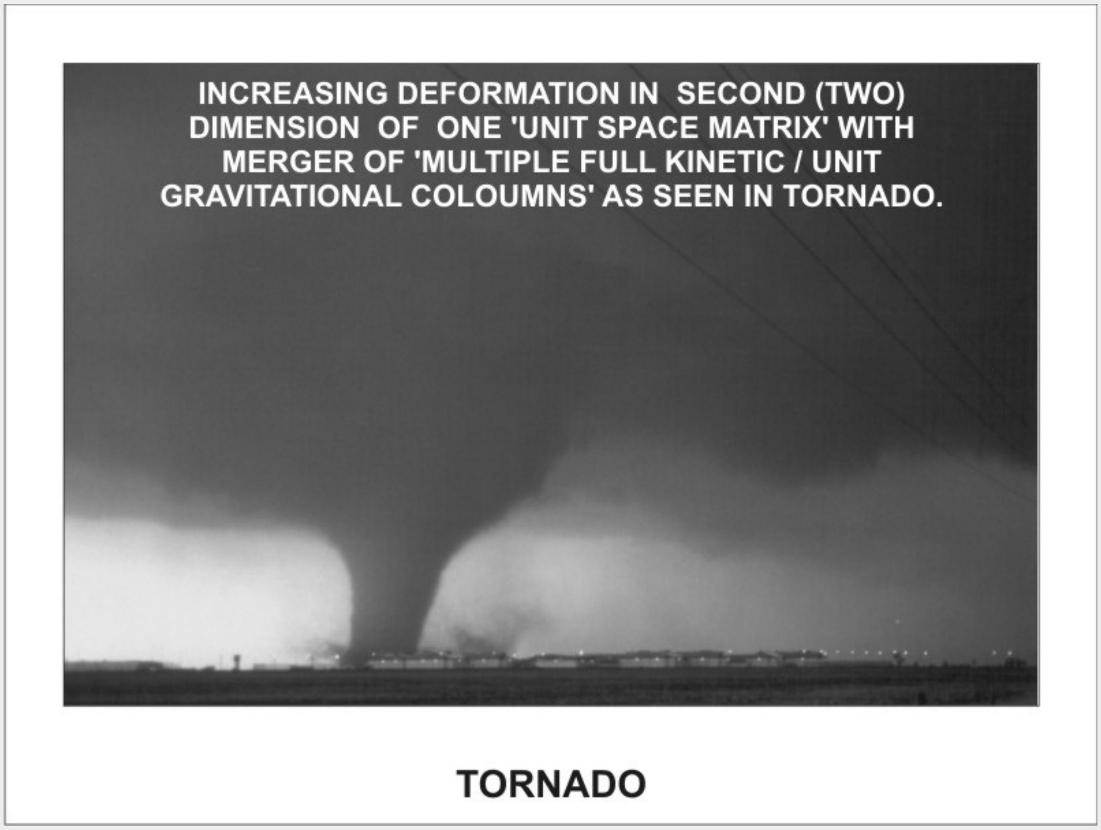

INCREASING DEFORMATION IN SECOND (TWO) DIMENSION OF ONE 'UNIT SPACE MATRIX' WITH MERGER OF 'MULTIPLE FULL KINETIC / UNIT GRAVITATIONAL COLOUMNS' AS SEEN IN TORNADO.
TORNADO

Diagram 3.18 : Multiple two dimensional deformation unite to form orbits of all planets and give birth to tornadoes

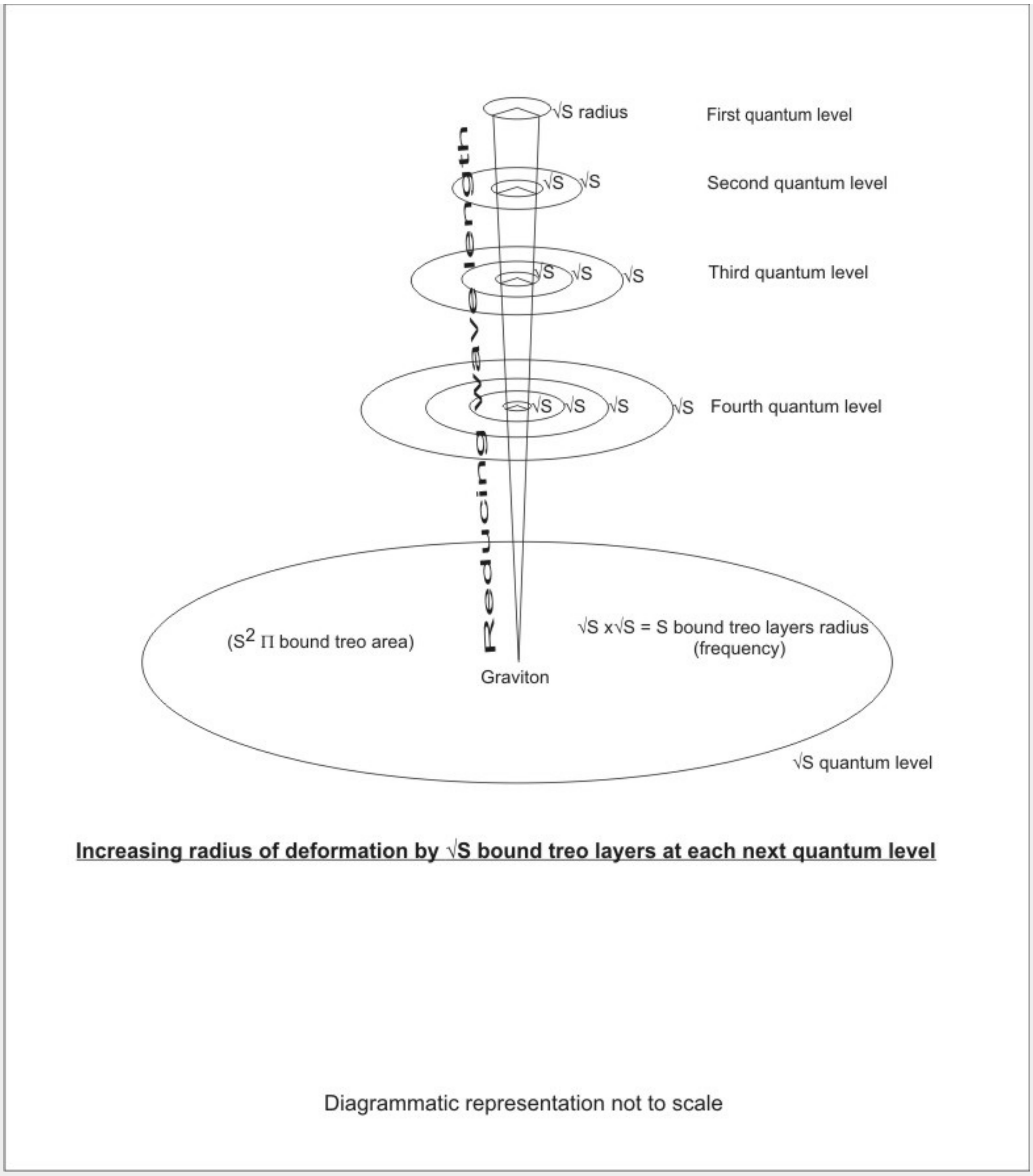


Diagram 3.19; With increasing deformation in second dimension the wave length of matter wave decreases and this matter wave forms orbit of smaller circumference

PLANETARY ORBITS (are two dimensional deformation in second dimension)

Planetary orbits of all planets of our solar system are placed at ten quantum levels (which form from 10^4 th quantum level to 10^5 th quantum level) in gravitational coloumn of Sun (this gravitational field of Sun is formed by joining of $2 \times 10^{38}–1$ (2n–1 gravitons [3] as per coloumn geometry) 'full kinetic / unit gravitational coloumns' present at the periphery of 10^{38} layered gravitational sphere of Sun).

The diluted mass pressure of Sun at the level of planetary orbits is 10^{39} quanta (10^{82} free treos) at this 10^4th quantum level (Details).

To support 10^{39} quanta (10^{82} free treos) the diluted mass pressure of Sun at 10^4 th quantum level, 10^4 sub kinetic coloumns (shells) each of 10^{39} kineton layers, having 10^{78} kinetons are formed. This gravitational kinetic energy of Sun (is v^2 or 10^{78} kinetons) at the level of planetary orbits can be calculated as v^2 (= MG/r).

(For exact values of v^2 in all planetary orbits, please see Table 5).

RC wavelength (λ) at 10^{18} th quantum level of second dimension, multiplied by $2 \times 10^{38}–1$ (number of 'full kinetic / unit gravitational coloumns') gives wave length of planetary orbit of Sun [$\lambda (2 \times 10^{38}–1)$]. When this 2 × RC wave length of planetary orbit is multiplied by π it gives Compton wave length which is equal to the circumference of this planetary orbit.[4]

Total S^2 kinetic energy is ground energy of second dimensional deformation, which is utilized in formation of each matter wave.

Total S^2 kinetic energy of second dimension is utilized by all matter waves which rotate (support) and revolute (propel) the mass-energy of each packet. Thus the Kinetic energy of matter wave = (number of free treos in packet × wavelength at this quantum level)

e.g. matter wave of ----

(1) Unit electron: 10^{64} free treos in unit electron packet which is supported × and propelled in 10^{22} bound treo wavelength = 10^{86} or S^2 kinetons.

(2) Nucleons: 10^{67} free treos in packet × 10^{19} wavelength = 10^{86} or S^2 kinetons form this matter wave.

(3) At planetary orbits: 10^{82} free treos in 10^{39} quanta (load) × 10^4 wavelength = 10^{86} or S^2 kinetons form this matter wave. (D.3.20)

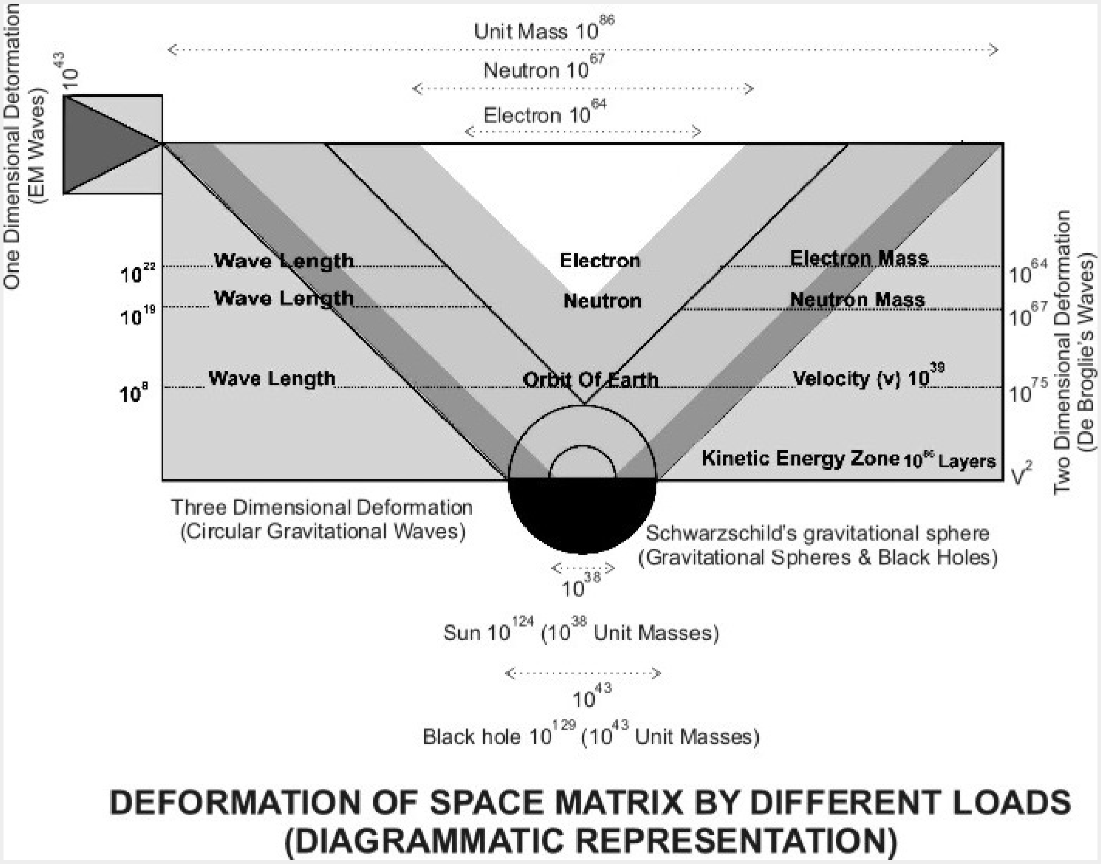

Unit Mass 10^86
Neutron 10^67
Electron 10^64
One Dimensional Deformation (EM Waves)
10^43
10^22
10^19
10^8
Wave Length
Wave Length
Wave Length
Electron
Neutron
Orbit Of Earth
Electron Mass
Neutron Mass
Velocity (v) 10^39
10^64
10^67
10^75
Two Dimensional Deformation (De Broglie's Waves)
Kinetic Energy Zone 10^86 Layers
V^2
Three Dimensional Deformation (Circular Gravitational Waves)
Schwarzschild's gravitational sphere (Gravitational Spheres & Black Holes)
10^38
Sun 10^124 (10^38 Unit Masses)
10^43
Black hole 10^129 (10^43 Unit Masses)
DEFORMATION OF SPACE MATRIX BY DIFFERENT LOADS
(DIAGRAMMATIC REPRESENTATION)

Diagram 3.20: S^2 energy of second dimension is consumed by matter wave of each elementary particle

Formation of Orbits

in vertically placed shells one over other along its wavelength, all identical (energy) orbitums together form one

orbit at this quantum level

All orbits of any elementary particle and atomic structure are formed by union of all identical orbitums of same size and at same energy level present in their respective sub shells of each shell, present along its vertical wavelength.

Number of quanta mass-energy in elementary particle = total number of orbitums formed in all shells = Wave Length or number of shells in this elementary particle × total number of orbitums in all sub shells of one shell.

Each orbitum is formed as closed loop of S bound treos. All the shells after union of identical energy orbitums (placed one over other) will construct the layers of one orbit (*two dimensional surface*) on which electron mass will swing along its wavelength. (D.3.16).

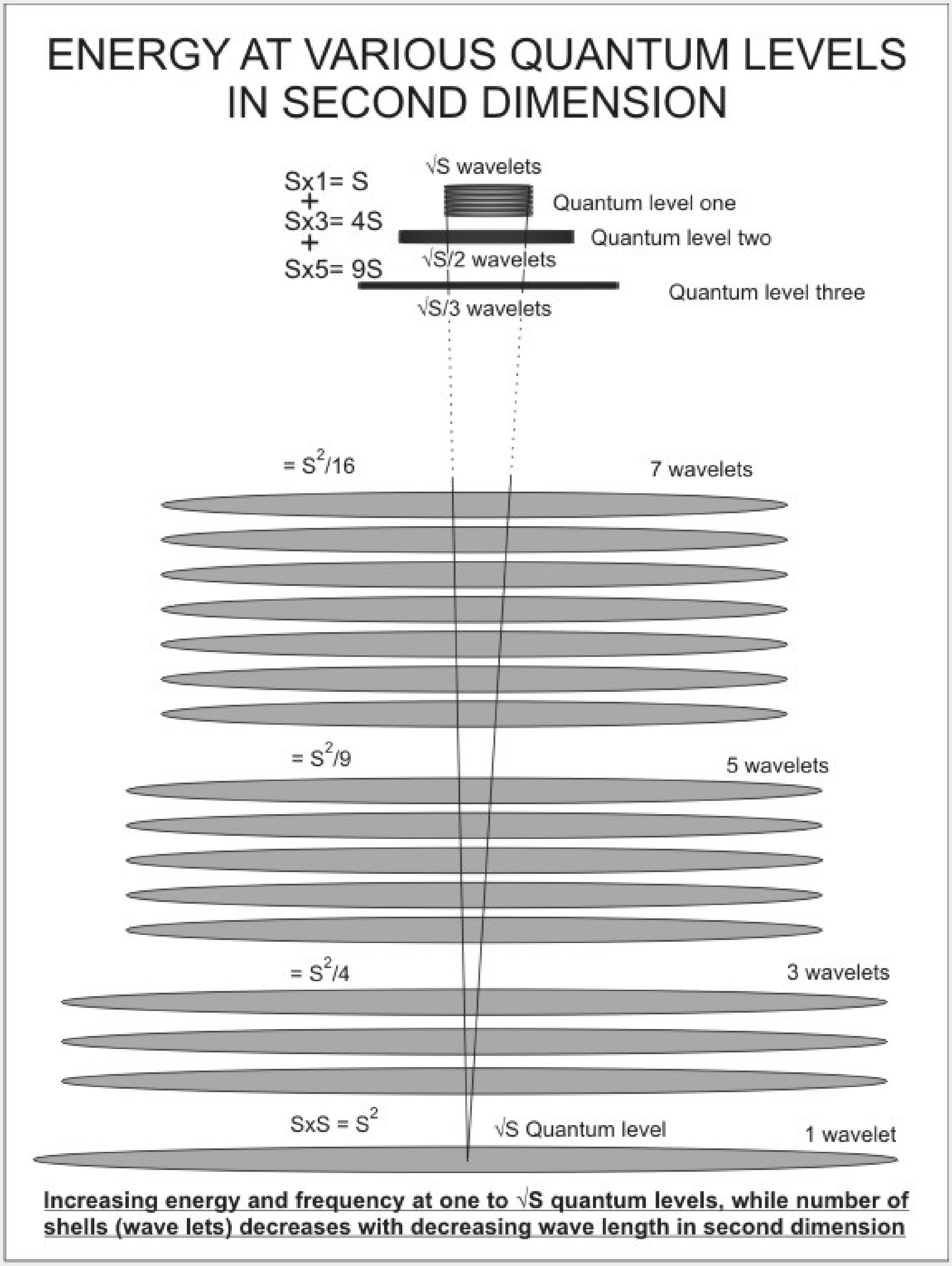
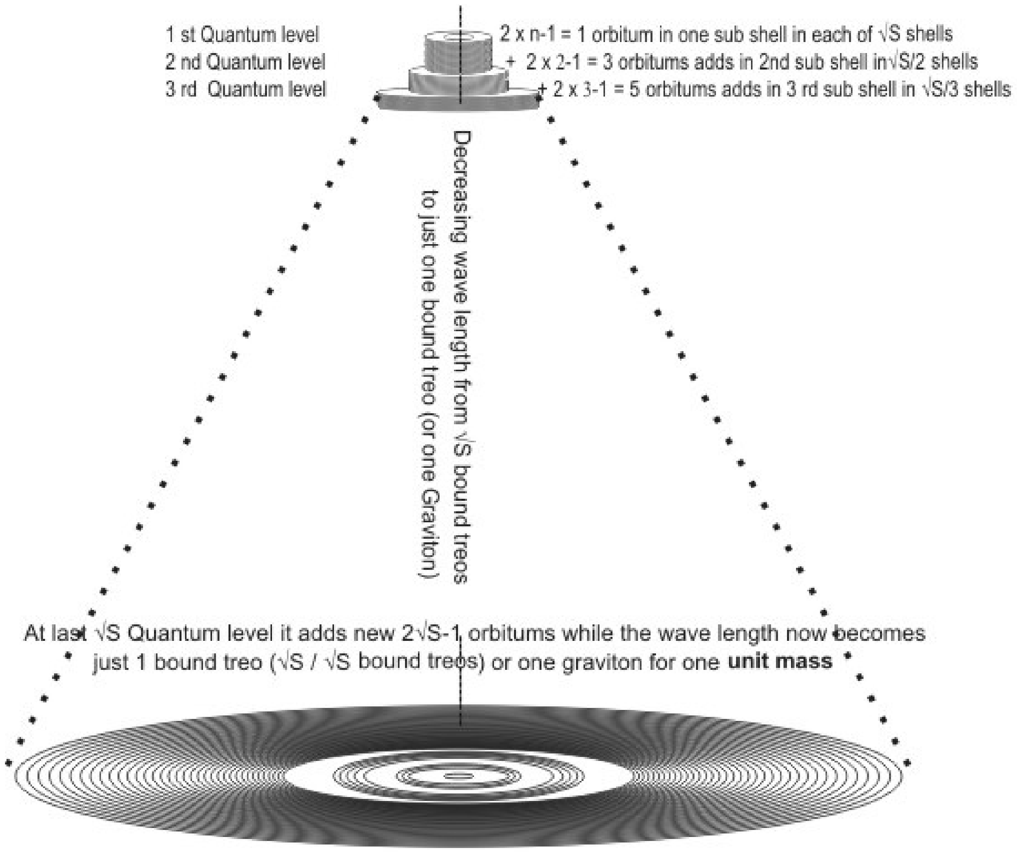

ENERGY AT VARIOUS QUANTUM LEVELS IN SECOND DIMENSION
Sx1= S
+
Sx3= 4S
+
Sx5= 9S
√S wavelets
Quantum level one
Quantum level two
√S/2 wavelets
Quantum level three
√S/3 wavelets
= S²/16
7 wavelets
= S²/9
5 wavelets
= S²/4
3 wavelets
SxS = S²
√S Quantum level
1 wavelet
Increasing energy and frequency at one to √S quantum levels, while number of shells (wave lets) decreases with decreasing wave length in second dimension

Diagram 3.21 : Increasing kinetic energy at increasing quantum levels

In second dimension at any n th quantum level 2 x n-1 orbitums adds in n sub shells in each of √S / n shells in wave length


1 st Quantum level
2 nd Quantum level
3 rd Quantum level
2 x n-1 = 1 orbitum in one sub shell in each of √S shells
+ 2 x 2-1 = 3 orbitums adds in 2nd sub shell in√S/2 shells
+ 2 x 3-1 = 5 orbitums adds in 3 rd sub shell in √S/3 shells
Decreasing wave length from √S bound treos
to just one bound treo (or one Graviton)
At last √S Quantum level it adds new 2√S-1 orbitums while the wave length now becomes
just 1 bound treo (√S / √S bound treos) or one graviton for one unit mass

Total S number of orbitums are at all √S quantum levels which together form one ‘ full kinetic unit gravitational coloumn’ at one graviton

Diagram 3.22 : Total S orbits in one ‘Full kinetic / Unit gravitational coloumn’

Charge, Magnetism, Spin

CHARGE - Moving free treos in unit electron packet,

MAGNETISM - Rotation of kinetons in coloumns

SPIN - Regaining of its original orientation after how many rotations of all packets of bosons and leptons

CHARGE

Moving free treos as ‘unit electron packets’ produce electric current. These unit electrons are counted as one unit charge or one eV.

The positive and negative charge of electrons and quarks is decided by the direction of the rotation of this mass-energy, which rotates due to the rotation of their supporting sub kinetic coloumns. The moving kinetons in rotating sub kinetic coloumn is responsible to form magnetic field of this particle.

[If we see the face of a rotating cylindrical packet which is moving forwards (and gaining space) and find it rotating anti clockwise (which represents its negative charge) and then look at its rear side (with loosing space), we will see it rotating clock wise (which represent its positive charge)].

MAGNETISM AND POLARITY

The rotating bound treos (kinetons) in all sub kinetic coloumns present in entire wavelength of elementary particle generate magnetic field and polarity of magnet (of one elementary particle) is decided by direction of their rotation.

[If we see the one face of a rotating packet which is moving forward and find that its sub kinetic coloumns are rotating anti clockwise (and it represents its north polarity) and then we see same packet from its rear, we will find its sub kinetic coloumns are rotating clock wise (it represents its south polarity)]. for details refer to my previous Book ‘INSIDE A WAVE’ 2005, Manas Prakashan.

SPIN

Rotation itself is not spin but spin is property of all elementary particles and all bosons. Spin is basically related with rotation of elementary particle. The 0 spin, ½ spin, 2/3 spin, 1 spin and 2 spin indicate the number of rotations after which a rotating elementary particle will regain its original configuration (shape and position)*, while the clockwise or anti clockwise rotations decide + Spin or – Spin.*

Spin 0 means a spherical particle that will maintain its shape through out its rotation. Spin 1/2 in fermions, means that particle will regain its shape and position only after two rotations. 2/3 spin means that it will regain its original shape and position after one and half rotation. Spin 1 in bosons means that particle will regain its shape after one complete rotation. And spin 2 in graviton means that it will take only half (turn) rotation to regain its shape (e.g. like figure of queen in playing cards).

Each sub kinetic coloumn forms one shell in wave motion. All of them (shells) are placed one below the other and thus a Unit Electron wave with 1/2 spin, moves with each vibration from 1st to $\sqrt{S}$ th shells from top to bottom to rotate this unit electron once, which then moves from $\sqrt{S}$ th to 1st shell from bottom to top to be rotated second time. Thus after two rotation it regains its original position.

UNION OF QUANTUM PHYSICS WITH GENERAL THEORY OF RELATIVITY

Matter waves of Electrons, All Elementary particles and Planets can be viewed in the same frame and their orbital speed is decided by frequency of its matter wave

One by one vibration of √S shells (in reduced Compton wavelength) supports unit electron for one Planck least time. After providing support the matter wave pushes the mass packet of 'unit electron' of √S quanta mass-energy to 'next bound treo' in the orbit and this process is repeated √S times in one second. Thus electron packet rotates √S times and is propelled by √S bound treo distance in one second in its orbit of revolution.

Each rise of one unit electron mass energy at each next n th quantum level results in addition of √S bound treo layers in each shell of wave length and one new sub shell (with 2n–1 new orbitums) is added in each shell. Thus the frequency of wave (equal to orbital speed) increases by √S number at each next quantum level in second dimension.

Similarly all elementary particles or Point mass of Planet rotates once and also supported, due to one by one vibration of all shells placed vertically in its RC wavelength from top to bottom . After being thus supported at one bound treo, the electron, elementary particle or point mass of planet, moves to next bound treo in its orbit. Hence the orbital speed of elementary particle or planet = frequency = S / RC wavelength.

Kinetic energy in any orbit formed at a particular quantum level depends upon exerted mass pressure at this level of by 'mass energy of parent body' placed at its center. The kinetic energy in orbit decides the speed of revolution of electron in atomic orbits. K, L, M, N kinetic energy level in any sub shell is generated in response to 'diluted mass pressure of nucleus' exerted on this sub shell.

This pattern of providing 'orbital speed to point mass of any baby body' placed at a particular quantum level in second dimensional deformation or in gravitational field of parent body is valid for revolutionary speed of Electron in atomic orbits, planets in their respective planetary orbits and their satellites .

The number of bound treo layers in each shell (frequency) of any matter wave is equal to ts orbital speed v*,* where $v^2 = MG/r$, which is gravitational kinetic energy calculated at any point at a distance 'r' in gravitational field of any parent body of mass M, G being the gravitational constant. After each rotation (*phase velocity of matter wave*) the point mass of planet the point mass of planet is propagated by one bound treo distance in planetary orbit (*group velocity of matter wave*) and thus achieves a planetary speed of its revolution (v) , which is also equal to v number of bound treo layers in each shell (frequency), and moves by v bound treo distance per second, at its 'orbital speed '.

Detailed exact calculations to understand matter wave in general

(A) At first quantum level of second dimension with the example of unit electron

(1) One Unit Electron is made of √S quanta free treos (or 4.307×10^{21} quanta mass-energy) which uniformly spread on all rotating shells in wave length i.e. 4.307×10^{21} shells (√S shells) present on each apex

bound treos in wavelength.

(2) This load is supported by √S bound treo layers (4.307×10^{21} bound treo layers) in each shell, which have total $(\surd S)^2 = S$ kinetons, (here each shell has one sub shell and one orbitum).

Electron is pushed from ‘one bound treo to next bound treo’ each time, after completing one vibration of each of 4.307×10^{21} shells in RC wave length of unit electron packet which vibrate one after the other, thus it moves by 4.307×10^{21} bound treo distance in 1.855×10^{43} vibrations which occur in one second (it is comparable with conventional RC wave length of Electron $0.38600391 \times 10^{-12}$ m = 23.88951×10^{21} Bound treo distance per second)

(B) THE 6.878×10^{17} th QUANTUM LEVEL OF SECOND DIMENSIONAL DEFORMATION

(1) 4.307×10^{21} quanta (√S quanta) in ‘one unit electron’ × (6.878×10^{17}) th quantum level = 2.9625×10^{39} quanta Mass energy in packet placed at this 6.878×10^{17} th quantum level.

(2) The Mass energy at each apex bound treo (load) at this quantum level = 5.495×10^{82} free treos (in 2.9625×10^{39} quanta) mass energy, gets equally spread on 0.6263×10^{4} shells (number of shells in its RC wave length) and exerts a ‘load’ of 8.77644×10^{78} free treos at each apex bound treo.

(3) 5.495×10^{82} free treos mass energy at this quantum level multiplied by its 0.6263×10^{4} bound treos wavelength = 3.446263×10^{86} or S^2 ; this S^2 energy is universally available to be utilized by any matter wave

in second dimensional deformation.

(4) This ‘load’ of 8.77644 × 10^{78} free treos at each apex bound treo is supported by 2.9625 × 10^{39} bound treo layers (frequency) forming coloumn of each shell which also have (2.9625 × 10^{39}) ^{2} = 8.77644 × 10^{78} kinetons.

{structurally one shell of 2.9625 × 10^{39} bound treo layers have 6.878 × 10^{17} sub shells (quantum level number) and (6.878 × 10^{17})^{2} = 4.730 × 10^{35} orbitums}

(5) Number of orbitums per shell × number of shells in wavelength.= (4.730 × 10^{35}) × (0.6263 × 10^{4}) = 2.9625 × 10^{39} orbitums, which support 2.9625 × 10^{39} quanta mass energy in packet i.e. one orbitum per quanta mass energy

Thus

At 6.8 × 10^{17}th quantum level, with 2.9625 × 10^{39} bound treo layers and 8.77644 × 10^{78} Kinetons are there in each of 6.263 × 10^{4} shells in wave length to support 2.9625 × 10^{39} quanta mass energy in particle. By spreading on 0.6263 × 10^{4} bound treos RC wavelength (on all apex bound treos forming shells), and 2.9625 × 10^{39} frequency (bound treo layers in each shell), which is also the orbital speed in number of bound treos distance per second.

(C) ORBIT OF PLANET MERCURY

The 0. 6263 × 10^{4} quantum level in gravitational coloumn (field) of Sun, corresponds with above described.6.8 × 10^{17}th quantum level of second dimensional deformation where both have same Kinetic energy of 8.77644 × 10^{78} Kinetons in 2.9625

× 10^{39} bound treo layers in each shell (frequency) and 0.6263 × 10^4 bound treos wavelength.

Example of revolution speed of planet Mercury

The point mass of planet Mercury is pushed from ‘one bound treo to next bound treo’ each time after one by one vibration of 0. 6265 × 10^4 shell in wave length of Mercury orbit, or 2.9625 × 10^{39} bound treo distance in 1.855 × 10^{43} vibrations which occur in one second = *47.871 km per second in its orbit, known revolving speed of planet Mercury.*

Mass of all Elementary Particles

All elementary particles are just a collection of mass-energy and its localization energy at any one particular quantum level

Mass energy in Matter particles :

The mass-energy increases at the rate of one unit electron mass (or √S quanta mass-energy or momentum) at each of √S quantum levels in second dimension, and forms energetic electrons and all elementary particles.

(1) Electron and Positron both have mass energies of √S quanta or 1.439491604 × 10^{64} free treos or 0.51 MeV (or one unit electron mass)

(2) Proton packet has mass-energy of 2.641704371 × 10^{67} treos.

(3) Neutron packet has mass-energy of 2.645363273 × 10^{67} treos

(4) Planck mass which is one unit mass consists of S^2 Free treos or S quanta energy i.e. 3.442488398 × 10^{86} free treo *or 2.17 ×* 10^{-8} *kg* (in √S Unit Electron masses). *One Planck mass is approx. equal to the mass of flea egg.*

Composite particles are formed by union of other 'elementary particles'. Elementary particles are only Six Quarks *(they are up – down, strange – charm and top- bottom) and six anti quarks,* three leptons *(Electron, Muon, and Tau Electron) and three anti leptons and* three neutrinos *(Electron neutrino, muon neutrino and tau neutrino) and their anti neutrinos.*

There are four bosons (photon, gluon, W, + W, and Z boson and Graviton) according to standard model. This proposed model does not accept newly introduced Higgs Boson in the form it is presented.

Two electrons with same charge can not be united as such. But It has been postulated in the treo model that 'one unit electron mass' increases at each of √S quantum levels in deformation of second dimension. To unite all electron masses this requires great amount of energy - the 'localization energy' - action of Gluon.

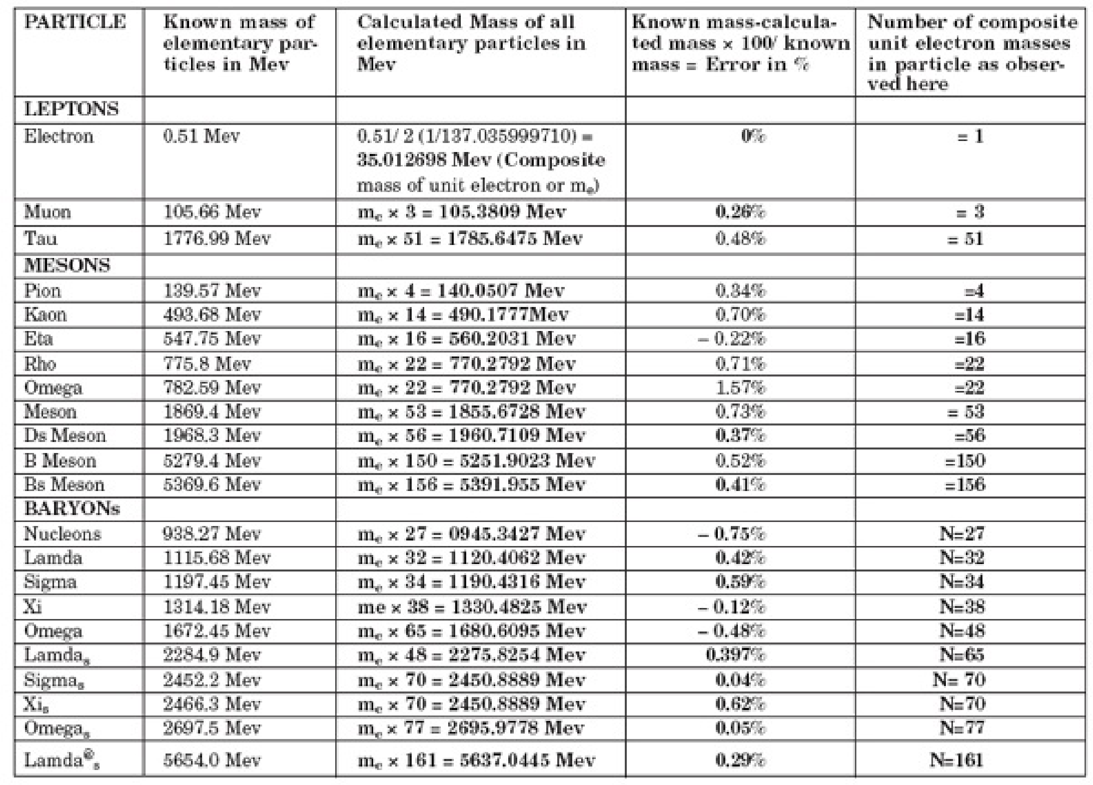
Conventionally If L is localized space, then energy required for this localization is hc/L. Divide this energy by c^2 *to get the composite mass (h/cL) of elementary particle.*

According to treo model, 0.51 MeV (1.439491604 × 10^{64} free treos) is mass-energy of unit electron. This is multiplied by localization energy to get one 'composite mass of one unit electron'.

Fine structure constant (numeral value = 1/137) is the expression of unit charge of electron. The fine structure constant is coupling constant and is ratio of energy required to counteract the force of repulsion in *between two electrons vs. reduced Compton wavelength of photon.*

In the treo model it is proposed for the first time that the ‘composite mass of unit electron’ can be calculated by division of mass-energy of unit electron i.e. 0.51 MeV by twice of Fine structure constant. Thus the calculated composite mass of ‘unit electron’ is 35.01 MeV [0.51 MeV / 2 (1/137) = 35.01 MeV] .To understand the localization energy it can be seen as cementing material on each bricks (unit electron) to unite them to construct a wall. (energy which binds electrons to form bigger elementary particles)

This composite mass is added as one unit and all elementary particles which appear at different quantum levels have their composite mass, as integral multiple of this 35.01 MeV composite mass energy (see Table 2). From this observation we can conclude that all matter in the universe is created by collection of Electrons of this 35.01 MeV composite mass energy. Hence the unit of creation of all visible matter is composite mass of one unit electron.



PARTICLE	Known mass of elementary particles in Mev	Calculated Mass of all elementary particles in Mev	Known mass-calculated mass × 100/ known mass = Error in %	Number of composite unit electron masses in particle as observed here
LEPTONS				
Electron	0.51 Mev	0.51/ 2 (1/137.035999710) = **35.012698 Mev (Composite** mass of unit electron or m_e)	0%	= 1
Muon	105.66 Mev	**$m_e \times 3 = 105.3809$ Mev**	**0.26%**	= 3
Tau	1776.99 Mev	**$m_e \times 51 = 1785.6475$ Mev**	0.48%	= 51
MESONS				
Pion	139.57 Mev	**$m_e \times 4 = 140.0507$ Mev**	0.34%	=4
Kaon	493.68 Mev	**$m_e \times 14 = 490.1777$Mev**	0.70%	=14
Eta	547.75 Mev	**$m_e \times 16 = 560.2031$ Mev**	– 0.22%	=16
Rho	775.8 Mev	**$m_e \times 22 = 770.2792$ Mev**	0.71%	=22
Omega	782.59 Mev	**$m_e \times 22 = 770.2792$ Mev**	1.57%	=22
Meson	1869.4 Mev	**$m_e \times 53 = 1855.6728$ Mev**	0.73%	= 53
Ds Meson	1968.3 Mev	**$m_e \times 56 = 1960.7109$ Mev**	**0.37%**	=56
B Meson	5279.4 Mev	**$m_e \times 150 = 5251.9023$ Mev**	0.52%	=150
Bs Meson	5369.6 Mev	**$m_e \times 156 = 5391.955$ Mev**	**0.41%**	=156
BARYONs				
Nucleons	938.27 Mev	**$m_e \times 27 = 0945.3427$ Mev**	**– 0.75%**	**N=27**
Lamda	1115.68 Mev	**$m_e \times 32 = 1120.4062$ Mev**	**0.42%**	**N=32**
Sigma	1197.45 Mev	**$m_e \times 34 = 1190.4316$ Mev**	**0.59%**	**N=34**
Xi	1314.18 Mev	**me × 38 = 1330.4825 Mev**	**– 0.12%**	**N=38**
Omega	1672.45 Mev	**$m_e \times 65 = 1680.6095$ Mev**	**– 0.48%**	**N=48**
Lamda$_s$	2284.9 Mev	**$m_e \times 48 = 2275.8254$ Mev**	**0.397%**	**N=65**
Sigma$_s$	2452.2 Mev	**$m_e \times 70 = 2450.8889$ Mev**	**0.04%**	**N= 70**
Xi$_s$	2466.3 Mev	**$m_e \times 70 = 2450.8889$ Mev**	**0.62%**	**N=70**
Omega$_s$	2697.5 Mev	**$m_e \times 77 = 2695.9778$ Mev**	**0.05%**	**N=77**
Lamda$^{®}_s$	5654.0 Mev	**$m_e \times 161 = 5637.0445$ Mev**	**0.29%**	**N=161**

TABLE 2 : MASS SPECTRUM OF ALL ELEMENTARY PARTICLES

(All elementary particle are integral multiple of composite mass of one electron)

Three classes of Particles in Nature

Coloumn occupy 1/3rd area of one shell so it is formed in one (phase) out of three spatial directions, while matter particles can condense only in one phase at few selective quantum levels, thus we will get Three Classes of Elementary Particles.

Layers of any sub kinetic coloumn get arranged in one ‘arc of a circle’ (of 2n–1 bound treos) which occupy 1/3 rd circumference, of the circles of increasing radius (n) at each next quantum level. The increasing deformation in second dimension should cover all three spatial directions one by one. The properties of this mass-energy distributed in these three different spatial directions will differ in nature [5] and thus it produces three types of elementary particles. These arcs in three directions can be visualized as three filaments twisted as one rope and quantum levels are its knots.

But all visible universe is made up of only one class of elementary particles where only Up and Down quarks are used in creation, (i.e. it can be imagined that one type of quarks comes from one cord out of three cords in a rope) out of total three class of quarks. Other bigger quarks of other class (Charm and Strange, Top and Bottom) at higher quantum levels are unstable particles which ultimately changes into stable Up and Down quarks.

The wave supporting any elementary particle (by one pendulum motion) in 2x RC wave length can only be formed at one fixed layer of fixed length (2S/n bound treos) of one full kinetic/unit gravitational coloumn, according to number of quanta mass-energy (n) in packet. It selects only one fixed layer at one fixed quantum level in one spatial direction for condensation of one elementary particle while in three spatial directions at three different quantum levels all three class of particles are formed.

Nucleon-synthesis (Formation of Nucleons)

Soon after the Big Bang the voids started getting uncurled. Most of treo got bounded with voids as bound treos to construct space matrix. *But after a critical time and at a critical density of space substance about 6% to 10% energy* (of total left free treos as bound treos they not formed space-matrix), in this baby universe, condensed to form all nucleons packets (made up of 2.6 × 10^{67} free treos, for exact calculation see appendix). Thus the matter (all nucleons) was formed, in this short period, in life of early universe named as 'era of nucleon syntheses'.

Quarks with either one or two sub kinetic coloumns in any one shell with only 1/3 and 2/3 charge could be formed, in this short period; when the deformation of space-matrix was intense and from all sides (simultaneously from all three spatial directions and in all x, y, and z planes) in early universe, which was suitable to condensation of these particles.

Two opposite directions of flow of energy in two rotating (magnetic) vortexes which form in one unit space-matrix are produced in this second dimensional deformation and counter-deformation which regulates the direction of rotation of its sub kinetic coloumns (magnetic polarity) and decides positive and negative charge of quarks and all other elementary particles. This rotation of space-matrix in two opposite directions (in two magnetic vortexes) and their junction at a common place (over lapping with increasing second dimensional deformation near the center of unit space-matrix) is required for production of quarks and anti quarks, by $2/3^{rd}$ and $1/3^{rd}$ lobelization of mass-energy (supported by one or two rotating sub kinetic coloumns in same shell) and it results in 1/3 rd and 2/3 rd charge of quarks. Nucleons are formed by union of quarks. These intense deformations are produced (in gravitational spheres and by supernovae bursts) and required to construct the structure of atom along with the conservation of c p symmetry of other elementary particles.(D.3.23 : Second dimensional deformation and counter deformation).

Atoms of elements up to Iron are produced in stars, while bigger elements then Iron (e.g. gold) are produced by super nova bursts. After *this period of ‘era of nucleosynthesis’ the identical conditions were never produced again in the life of universe, thus we find a fixed number of nucleons in universe.*

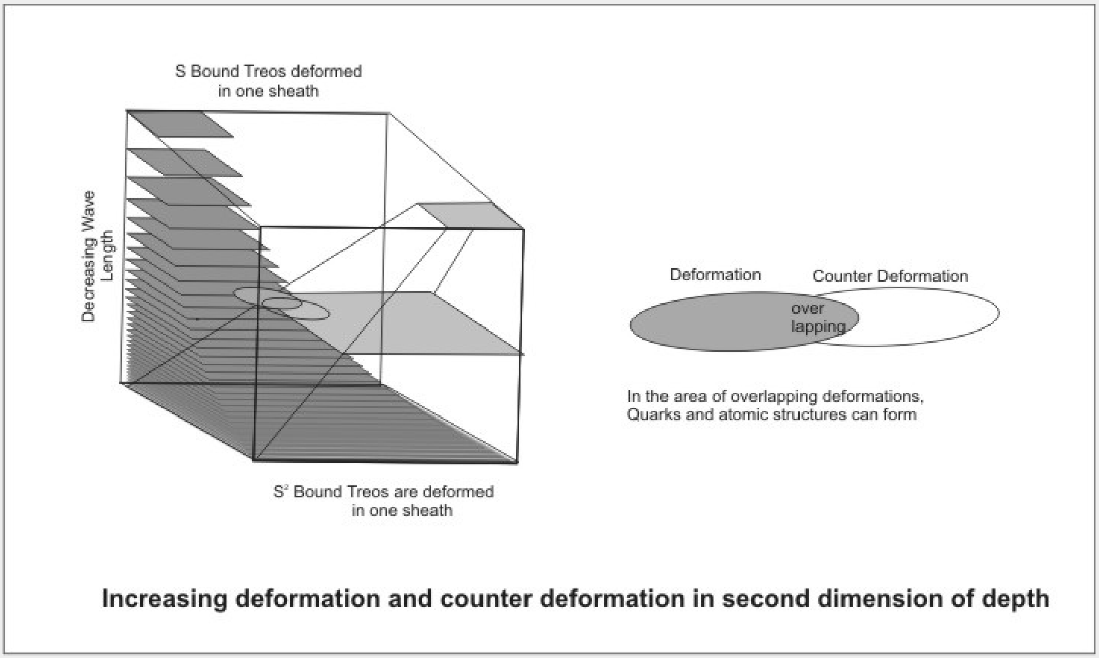

S Bound Treos deformed in one sheath
Decreasing Wave Length
Deformation
Counter Deformation
over lapping
In the area of overlapping deformations, Quarks and atomic structures can form
S² Bound Treos are deformed in one sheath
Increasing deformation and counter deformation in second dimension of depth

Diagram 3.23 : Second dimensional deformation and counter deformation (formation of two magnetic vortexes)

Production of quarks

Concept of quarks as architectural basic unit of all matter, it comes in exsistance due to our ignorance about coloumn geometry, which is opted by space matrix during contraction of space matrix in response to increasing load. One third area of each shell is occupied by one sub kinetic coloumn in any elementary particle, while 2/3 area of this shell in two spatial directions out of total three (x, y, z) are still available. The increasing and more concentrated mass-energy at higher quantum levels due to above mentioned factors will influence this geometry of deformation. The ‘load’ of ‘mass-energy in elementary particle’ is normally supported by one sub kinetic coloumn which occupies 1/3 area of shell. But increased and concentrated mass can be lobelized as either one or two lobes supported by one or two sub kinetic coloumns, out of any three spatial directions in same shell at same quantum level to form quarks.

Quarks (responsible for production of all nucleons) are divided as pairs of three classes of particles according to their increasing masses, as up & down, charm & strange, top & bottom and six anti quarks (due to rotation of its mass-energy clock wise and with their opposite positive charge). Only up and down quarks unite to form all nucleons (matter of universe) while other quarks are temporary entities which will ultimately degenerate in up and down quarks.

We know that the mass-energy which increases by ‘one electron mass’ with its ‘one unit electron charge' at each next quantum level always accumulates in integral multiples, along with its fixed ‘localization energy’ (Gluon), to form composite mass and charge of all ‘elementary particles.

With increasing mass-energy by ‘one electron mass’ along with its increasing ‘localization energy’ at each next quantum level results in increased ‘load’ at each apex bound treo in progressively reducing wavelengths as mass-energy gradually concentrates at each next quantum level. (D.2.10).

Formation of nucleons from ‘up and down quarks’ can take place only in limited area of deformation in one cube of unit space-matrix. This limited area forms with the increasing deformation of second dimension in depth, where - ve magnetic vortex rotating anti clock wise originating from a, b side, is super imposed with counter deformation with +ve magnetic vortex rotating clock wise, which increases from c, d side (D.3.20)

The formation of lobes of different mass-energy can occur at 6 quantum levels to form six quarks and six anti quarks present in nature. At each quantum level two size and type of lobes are formed, one lobe can move clockwise in its orbit and other anticlockwise to form ‘anti quark’ and ‘quark’ respectively. The other two class of (*unstable) quarks* of much increased mass energies which pair as strange and charm, or top or bottom are not different entities but are formed due to repetition of this process, at still higher quantum levels in greater depth (and when with opposite charge they will produce anti-quarks).

Fusion of Quarks occurs with 1/3 rd charge and 2/3 charge (mass energies supported at same shell) and / or according to their different (+ and - charge) direction of rotation.

Quarks and anti quarks unite to form all matter of equal or different mass energies with same or opposite charge, and it requires two identical deformations (two magnetic vortex which involve multiple quantum levels) meeting at same quantum level. One rotating sub kinetic coloumn in shell will support 1/3 part of mass-energy and 1/3 charge (of down quark) and two sub kinetic coloumns in one shell will support 2/3 part of mass-energy and 2/3 charge (of up quark) and will unite to form stable nucleon supported from all three spatial directions by three sub kinetic coloumns.

Once after total overlapping of two vortexes (deformations) one on other, further formation of particle and anti particle pairs are not possible in this fully overlapped area, thus we do not find stable elementary particles bigger than nucleons in nature.

There is no place for Higgs Boson of 125 GeV in this model and it can be this area of fully overlapped deformation confused as new boson. Still forming layers of ‘full kinetic /unit gravitational coloumn support the load of increasing number of atoms and molecules; till the formation of one ‘full kinetic unit gravitational coloumn’ is completed to support ‘*one unit mass’ of* 2.17×10^{-8} *kg (Planck’s mass).*

To form nucleons three ‘quarks’ join together with their two or one lobe they get condensed in two or one different spatial direction and after fusion total three lobes are supported by three sub kinetic coloumns from all three x, y, z directions, to produce Nucleons. *It produces one stable Proton with 2 up and 1 down Quark (+ 2/3 charge, + 2/3 charge and one –1/3 charge = total + 1 charge) and with a little increase in its mass by ‘one composite electron mass’ at next quantum level and unstable Neutron is produced made up of 1 up and 2 down Quarks (+2/3 charge and two –1/3 charges = a neutral particle)* [6]

Three quarks will pair either as lobes with + 2/3 charge and –1/3 charge, but of two different sizes of 2/3 and 1/3 mass, from three different spatial directions to form nucleons, or by union of one quark and one anti-quark of equal size, each of 1/3 mass to form one pion or kaone. Even the union of tetra quarks have been observed. Union of all these masses of different quarks along with their supporting sub kinetic coloumns, generate different union patterns of localization energy which are classified as 8 types of gluons of ‘strong forces’.

Proton particle, wrapped by sub kinetic coloumns of all three quarks are protected (from expanding space-matrix which produces aging of every thing) from all directions. These supporting kinetic coloumns simultaneously compress, the rest mass-energy of all these quarks producing a Proton particle and wraps it from all around, to convert it in one most stable composite particle found in nature (*half life of proton is* 10^{32} *years*). The rest mass-energy as free treos along with their localization energies (which increases in kinetic coloumns) after being separated from space-matrix by Higgs mechanism [7] together constitute ‘composite mass of nucleon’.

Quantum Levels of electrons in an Atom

There are four quantum energy levels (divisions) by which electron energy is labeled in any atomic configuration. These are :

(1) Primary quantum level (n), marks the quantum level of electron, or quantum number or size of kinetic coloumn forming each shell.

(2) Azimuthal quantum level (l), marks the sub shell in which electron is placed or Layer number of kinetic coloumn where the electron is placed, at this particular quantum level.

(3) Magnetic quantum number (m), marks the magnetic momentum of this electron or this indicates where the electron orbit is formed in one out of two magnetic vortex (which overlap to form atomic structure in second dimensional deformation).

(4) Spin quantum number (+ spin or – spin) marks the clockwise anti-clockwise rotations of the Electron at this place.

No two electrons can have all four identical quantum numbers in an atomic configuration (Pauli’s exclusion principle)[8]. But with two different spin number two moving electrons can have same (n), (l), (m) quantum number.

The quantum levels in second dimensional deformation, are designated by Quantum numbers as primary quantum number ‘n’ and are labeled as n_1, n_2, n_3,n_4. In an atom the energy E of the system increases when atomic mass shifts to higher quantum level with increasing deformation and the energy concentrates by square of quantum level , as $(1)^2$ x E quanta, $(2)^2$ x E quanta,$(3)^2$ x E quanta, $(4)^2$ x E quanta.. at 1,2,3,4 quantum level or $(n)^2$x E quanta at any n^{th} quantum level .

But this total energy in each shell at 1st, 2nd, 3rd and 4th quantum level (which produces K, L, M and N energy levels of an atom) are due to increase in the radius of deformation by √S bound treo layers in each shell, at each next quantum level.

Number of bound treo layers in each shell (or its Radius or height of kinetic coloumn), now becomes 1√S, 2√S , 3√S and 4√S … while the kinetic energy in deformed area of coloumn becomes 1S, 4S, 9S and 16S..... respectively.

The sub shells are represented by Azimuthal quantum number *'l'* and are identified as s, p, d, f in 1st, 2nd, 3rd and 4th sub shell respectively. Each new sub shell at next n th quantum level adds 2n–1 orbits in wave length.

At first quantum level there is only one sub shell which has only one (1s) orbit.

At second quantum level in two sub shells, there is one 2s orbit and three 2p orbits.

At third quantum level, three sub shells have one 3s orbit, three 3p orbits and five 5d orbits.

At fourth quantum level, four sub shells have one 4s orbit, three 4p orbits, five 4d orbits and seven 4f orbits.

Here sub shell in second dimensional deformation (is equivalent to layer in sub kinetic coloumn in first dimensional deformation) has 2n–1 orbits in any n^{th} sub shell i.e. 1, 3, 5, 7, 9 orbits are in 1st, 2nd, 3rd and 4th sub shells in kinetic coloumn(shell) of second dimension.

These shells are one layered (one sub shell with 1 orbit), two layered (two sub shells and 1 + 3 =4 orbits), three layered (three sub shells with 1 + 3 + 5 = 9 orbits) and four layered (four sub shells with 1 + 3 + 5 + 7 =16 orbits) shells, which are arranged according to the proposed coloumn geometry.

These orbits are named as 1s in first sub shell at first quantum level, then 2s + 2 p_1, 2 p_2, 2 p_3 (1+3 orbits) in first and second sub shells of second quantum level, 3s + 3p_1, 3 p_2, 3 p_3 + 3 d_1, 3 d_2, 3 d3 , 3 d_4, 3 d_5 (1 + 3 + 5 orbits) in first, second and third sub shells of third quantum level and then 4s + 4p1 , 4p2 , 4p3 + 4d_1 , 4d_2 , 4d_3 , 4d_4, 4d_5 + 4f_1 , 4f_2 , 4f_3, 4f_4 4f_5, 4f_6, 4f_7 (1+ 3 + 5 + 7 orbits) in four sub shells of fourth quantum level.

Magnetic momentum as + and - are according to the place and ‘direction of rotation’ of its kinetic coloumns are designated by *m*. (as motion of ‘kinetons’ in rotating sub kinetic coloumns produces magnetism).

In Electron orbit + or – value of energy from base ground energy decides ‘magnetic quantum number’ of electron /or light elementary particle. One orbit in first sub shell have 0 magnetic momentum, at second sub shell it has 1+3 orbits with magnetic momentum of its orbits as + 1, 0, – 1 and at third sub shell the magnetic momentum in outer most orbits are + 2, + 1, 0, – 1, – 2 and so on.

Lastly the ‘Spin quantum number’ of +1/2 spin or – 1/2 spin depends on clock wise or anti clockwise spin of electron.+ Spin and – Spin of electrons in outer most orbit decides the boundary of ‘zone of attraction’ and ‘zone of repulsion’ of an atom.

Hence the total number of electrons and their orbits will be doubled in each sub shell (one with + spin and other of – spin electron). Thus [(1) × 2] = 2 electrons, [(1 + 3) × 2] = 8 electrons, [(1 + 3 + 5) × 2] =18 electrons, [(1 + 3 + 5 + 7) × 2] = 32 electrons are present at first, second, third and fourth Atomic quantum level respectively and construct the atomic structure of all elements in periodic table.

Arrangement of Electrons in all Elements of Periodic Table

The deformation of space-matrix with increasing size of atoms follows proposed coloumn geometry. Along with increasing number of protons (and increasing atomic number Z), in nucleus, the bigger nuclei sink in depth at higher quantum level.

Newly formed orbits are produced in increasing deformation and counter deformation alternatively and then the orbits of one sub shell are filled completely before filling of orbits of other sub shell starts and thus it explains Hund's rule (see example).

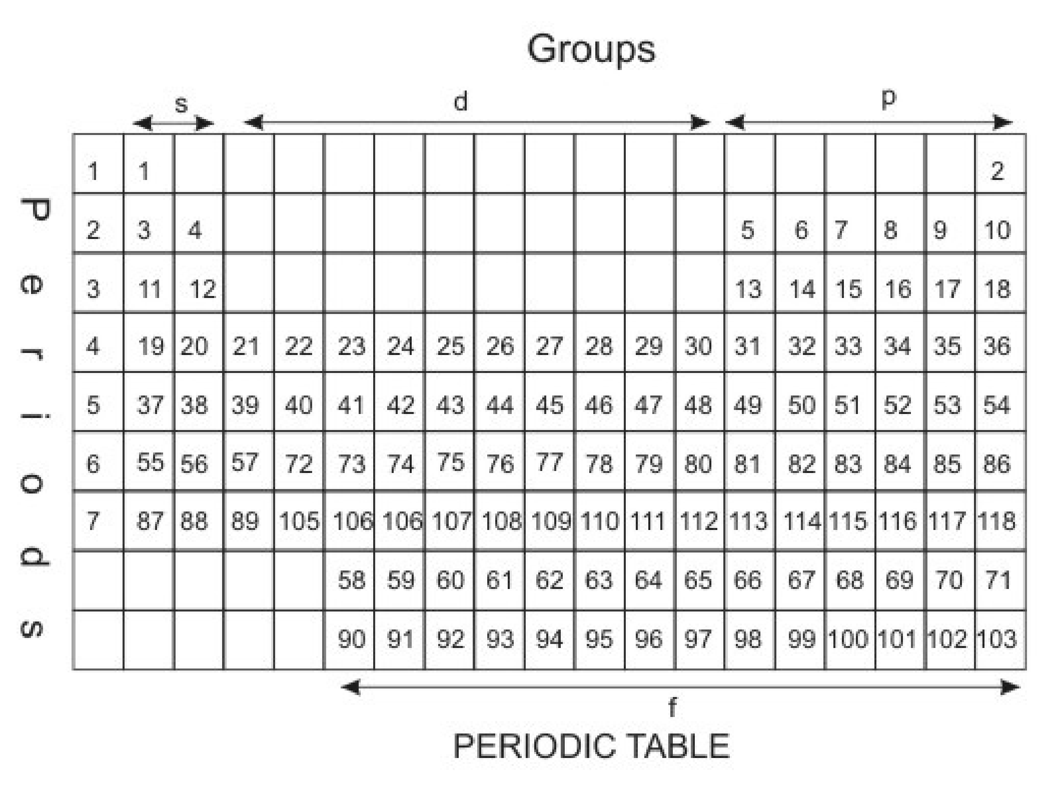
The 'diluting mass pressure' of nucleus at increasing distance, generates proportionately lesser kinetic energy in s, p, d, f sub shells according to their distance from nucleus.

With every increase of 'one electron mass' in mass energy it is now supported at next quantum level in second dimensional deformation. As proton is made up of many 'unit electron masses', there can be the difference of many 'quantum levels' between the quantum level of element (atomic quantum level) with one proton and quantum level of element with two protons, and all intermediate quantum levels (and its orbits) remains unfilled by electrons.

At third and fourth quantum level the third and fourth sub shells are formed before hand and then are filled in reverse order (as orbits with lesser energy level in fourth sub shell are filled first before filling of third sub shell at higher energy level) at these levels.

At fourth and fifth atomic quantum levels after filling s_4 and s_5 orbits, d orbits of lesser energy are filled with electrons in third sub shell in advance; before the start of filling of p orbits of second sub shell.

Similarly at Sixth and seventh atomic quantum level after filling of s_6 and $s_{7,}$ lesser energy f orbits of fourth sub shell and then d orbits in third sub shell are filled before the filling of p orbits of second sub shell.


Groups
s
d
p
Periods
f
PERIODIC TABLE

1	1																	2
2	3	4											5	6	7	8	9	10
3	11	12											13	14	15	16	17	18
4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
5	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
6	55	56	57	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86
7	87	88	89	105	106	106	107	108	109	110	111	112	113	114	115	116	117	118
					58	59	60	61	62	63	64	65	66	67	68	69	70	71
					90	91	92	93	94	95	96	97	98	99	100	101	102	103

PERIODIC TABLE

Increasing mass-energy of nucleons in atom increasingly deforms space-matrix and 1 to 118 Elements are formed. They are formed in paired shells placed at four energy levels with deformation and counter deformation forming 7 Periods (atomic quantum levels). In which electrons are arranged in different paired sub shells, s (1,1) p (3,3), d (5,5), f (7,7) according to proposed coloumn geometry. (D.3.19 : Atomic configurations).

FIRST ENERGY LEVEL which form one pair of s sub shell for elements having 1 or 2 Protons ---

FIRST PERIOD or First atomic quantum level: Electrons fill one pair of s sub-shell, formed in deformation and counter deformation and have same energy but different Z number (atomic no).

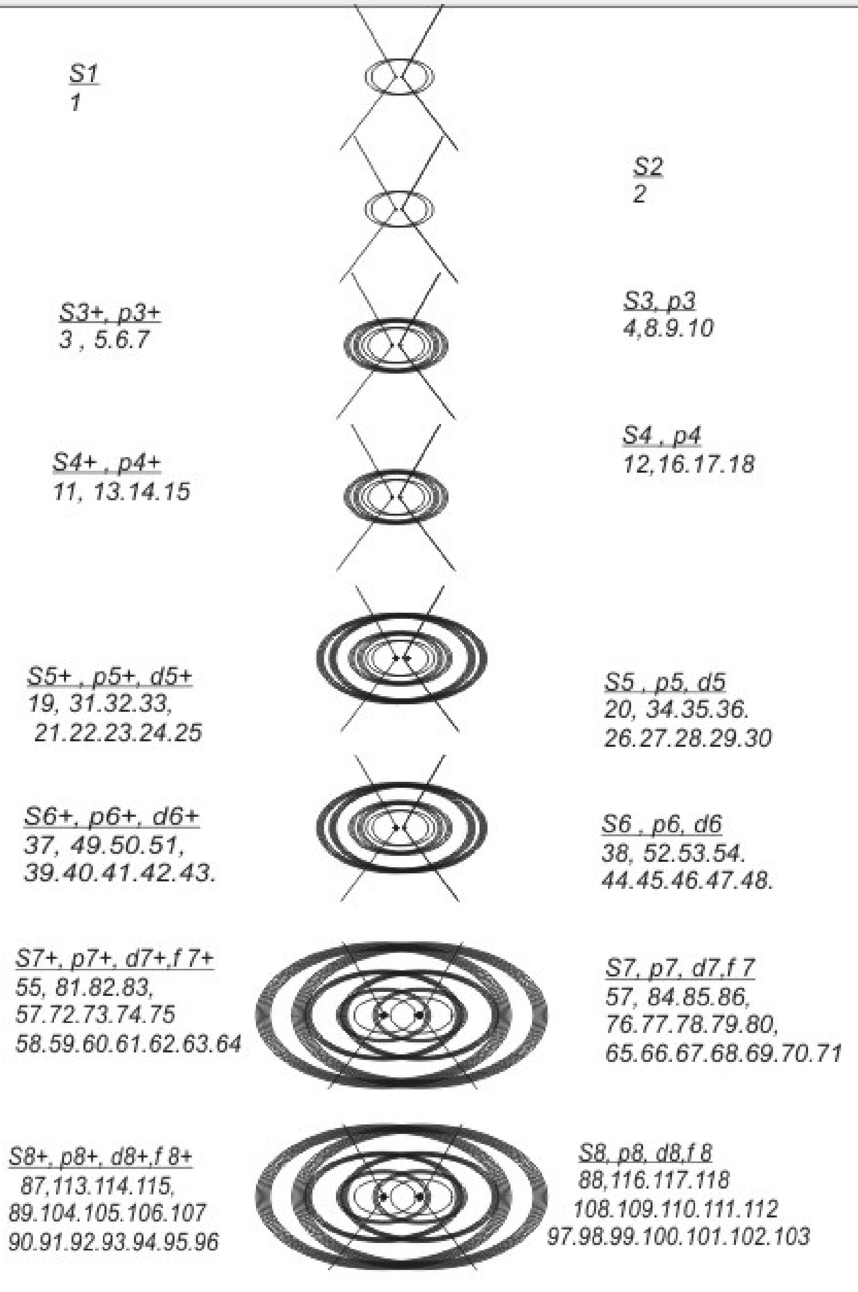
In one shell formed in deformation at this energy level at first (1a) atomic quantum level for atom having one proton (hydrogen atom)– one electron fills $s_{1\wedge}$ orbit.

One shell in deformation and one shell in counter deformation at this energy level at first (1b) atomic quantum level for atom with two protons (Helium atom)--- have two electrons, one in $s_{1a\wedge\,,}$ and another in $s_{1b\ v}$orbit

SECOND ENERGY LEVEL forming s and p sub shells, for elements having 3 to 18 Protons --- at second and third atomic quantum level; with one electron pair in $s_{2\ \&}$ s_3 sub shells and three electron pairs in $p_{2,}$ p_3 sub shells , in deformation and counter deformation.

SECOND PERIOD or Second atomic quantum level (3 to 10 electrons)

At second atomic quantum level - 2 electrons are already present at s_1 at first atomic quantum level, so now at second quantum level $s_{2\wedge}$ and s_{2v} orbits are initially filled..



Coloumn geometry 1,3,5,7..orbits (in coloumn and counter coloumn) regulates filling of electron orbits in s,p,d,f sub shells to form atomic structure of all elements

Diagram 3.24: Multi level Atomic Configuration due to 'sinking nucleus model' at Atomic quantum levels of seven periods

After this at this second atomic quantum level with increasing protons in nucleus a second sub shell with 6 p orbits is filled with 6 electrons (5th to 10th). (Initially one electron will fill $2p_x$, $2p_y$ and $2p_z$ one by one and then these electrons are paired (Hund's rule) with the addition of 3 more electrons).

THIRD PERIOD (11 to 18)

At third atomic quantum level: 2 electrons at s_1, 2 electrons at s_2 and 6 electrons at p_2 orbits are already filled, being at the lower quantum levels, so now at third atomic quantum level initially it forms s_3 orbit of first sub shell, which is filled one by one with 2 electrons $s_{3^\wedge}$ and s_{3v} (11th and 12th electron) to balance 11 and 12 protons in nucleus.

Then 6 more electrons (13th to 18th electron) fill p_3 orbits to balance next 13 to 18 protons.

THIRD ENERGY LEVEL OF ATOMIC STRUCTURE of second dimensional deformation by atoms of 19 to 54 Z number------ pair of sub shells having one electron in s_4 & s_5 three electrons in p_4 & p_5 and five electrons in d_4 & d_5 orbits

FOURTH PERIOD (19 to 36)

At fourth atomic quantum level: 2 electrons at s_1, 8 electrons at s_2 p_2 and 8 electrons at s_3 p_3 are already present; and now at this fourth atomic quantum level two electrons (19th and 20th) fill this newly formed s_4 orbits to balance 19 and 20 protons in nucleus.

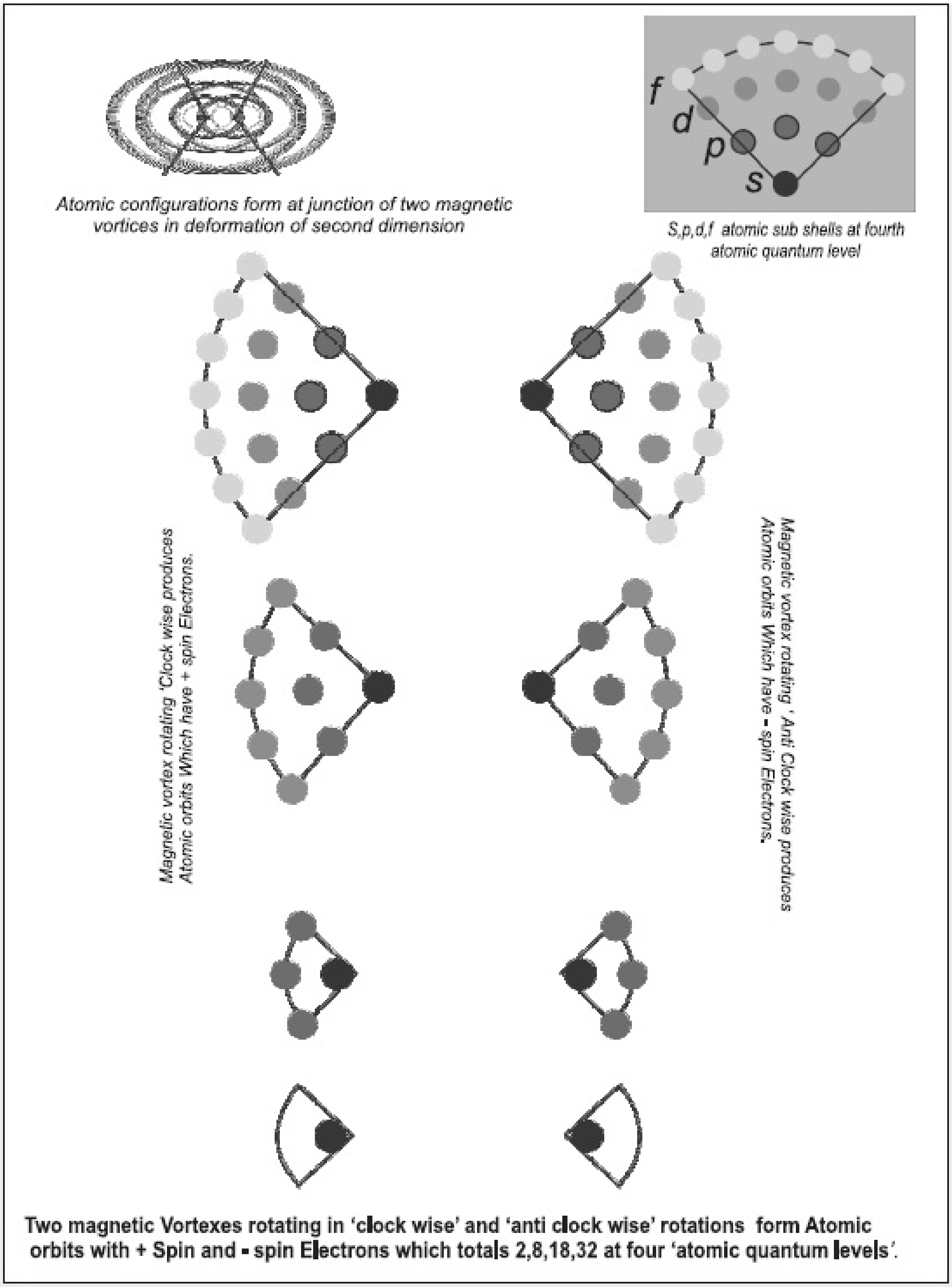

Atomic configurations form at junction of two magnetic vortices in deformation of second dimension
f
d
p
s
S,p,d,f atomic sub shells at fourth atomic quantum level
Magnetic vortex rotating 'Clock wise produces Atomic orbits Which have + spin Electrons.
Magnetic vortex rotating ' Anti Clock wise produces Atomic orbits Which have - spin Electrons.
Two magnetic Vortexes rotating in 'clock wise' and 'anti clock wise' rotations form Atomic orbits with + Spin and - spin Electrons which totals 2,8,18,32 at four 'atomic quantum levels'.

Diagram 3.25: sub shells and counter sub shells at four quantum levels

Then with pre formed deformation of space-matrix the unfilled p and d orbits were already formed in second and third sub shell.

Now d orbits will be filled first, before filling of p orbits; i.e. in reverse order from lower energy level to higher energy level. (*orbits at lower energy are filled first Aufban principle*)

Thus 10 electrons (21st to 30th electron) will fill d_4 sub shell first and then 6 electrons (31st to 36th electron) will fill p_4 sub shell to balance 21 to 36 protons in nucleus.

FIFTH PERIOD (37 to 54)

At fifth atomic quantum level: 2 electrons at $s_{1,}$ 8 at second quantum level s_2 p_2 and 8 at third quantum level s_3 p_3, 18 at fourth quantum level s_4, d_4, p4 are already present.

Now at fifth atomic quantum level 2 electrons (37th and 38th electron) first fill s_5 orbits at first sub shell, and then from lower energy levels to higher levels, 10 electrons (from 39th to 48th) fill d_5 orbits and then finally 6 electrons (from 49th to 54th electron) fill p_5 orbits to balance 39 to 54 protons in the nucleus of these elements.

FOURTH ENERGY LEVEL

SIXTH PERIOD (38 to 86)

At Sixth atomic quantum level: 2 electron at s_1 orbits , 8 at second quantum level at s_2 p_2 orbits and 8 at third atomic quantum level s_3 p_3 orbits, 18 at fourth quantum level s_4 d_4 p_4 orbits and 18 at fifth quantum level s_5, d_5, p_5 have already filled these lower quantum levels.

Now 2 electrons fill s_6 orbits and then one electron fills $1d_6$ orbit and then from lower energy level to higher energy level 14 electrons fill f_6 orbits, 9 fill d_6 orbits and lastly 6 electrons fill p_6 orbits (that is from 55th to 86th electron) to balance next 55 to 86 protons in the nucleus.

SEVENTH PERIOD (87 to 118)

At seventh atomic quantum level: 2 electrons at s_1, 8 electrons at s_2, p_2, 8 at s_3, p_3, 18 electrons at s_4 d_4 , p_4, 18 electrons at s_5, d_5, p_5 and 32 electrons at s_6, f_6, d_6, p_6 have already filled these lower quantum levels.

Further at seventh atomic quantum level 2 electrons will fill s_7 orbit, then 1 electron fills $d_{7,}$ 14 electrons fill f_7, remaining 9 electrons fill d_7 and lastly 6 electrons fill p_7 orbits (with 87th to 118th electron) to balance next 87 to 118 protons in the nucleus.

$2 \times n^2$ electrons are needed, to fulfill P parity (or spin) in 'saturated orbits of elements' of inert gases which have 2 ($=1^2 \times 2$), 8 ($=2^2 \times 2$), 18 ($= 3^2 \times 2$), 32 ($= 4^2 \times 2$), 50 ($=5^2 \times 2$), 72 ($= 6^2 \times 2$), 98 ($=7^2 \times 2$) electrons, while in unsaturated orbits of all other elements, electrons are present in any numbers.

The outer most sub shell (with its valance electrons) carves different size, shape and the orientation of space-matrix deformed by an element: and these different deformation patterns of space-matrix assign the element with their all physical and chemical properties.(*Outer most orbits of elements decide all physical and chemical properties of all elements*)

Zone of formation of atomic structures

The formation of 'atomic structure' can take place only in certain zone of unit space-matrix. This zone starts at one meeting point of increasing deformation of unit space-matrix in depth (with increasing mass-energy) which increases from side a b and meets with the increasing counter deformation of the same unit space-matrix coming from side c d. (D.3.23).

With all three identical Quantum levels (i.e. ‘n’ primary quantum number, ‘l’ angular quantum number and ‘m’ magnetic quantum number) in two deformations increasing from two sides, only the fourth spin quantum number of electrons differ due to their opposite spins, as they come from two different deformation and counter-deformation form atomic structures. (which increases in diagonally opposite sides in cube of unit space-matrix and forms two magnetic vortexes which are spinning in counter clock wise and clock wise rotations) .

This results in double the number of orbits at each atomic quantum level as they are contributed from two sides. 2 × (1) = 2 orbits, 2 × (1 + 3) = 8 orbits, 2 × (1 + 3 + 5) = 18 orbits and 2 × (1 + 3 + 5 + 7) = 32 orbits are formed in atomic configurations of bigger atoms (D.3.25).

ELECTRICITY AND MAGNETISM

Flow of free treos in packet of electron is electric charge while its rotating kinetic coloumns produces magnetism

Electrons are packets of free treos. Flow of electron packets of free treos is electric current. Energetic electrons retarded by a resistance comes to lower speed and sheds off few quanta of its surplus mass energy as packets of unit electrons which manifests as as electric power.

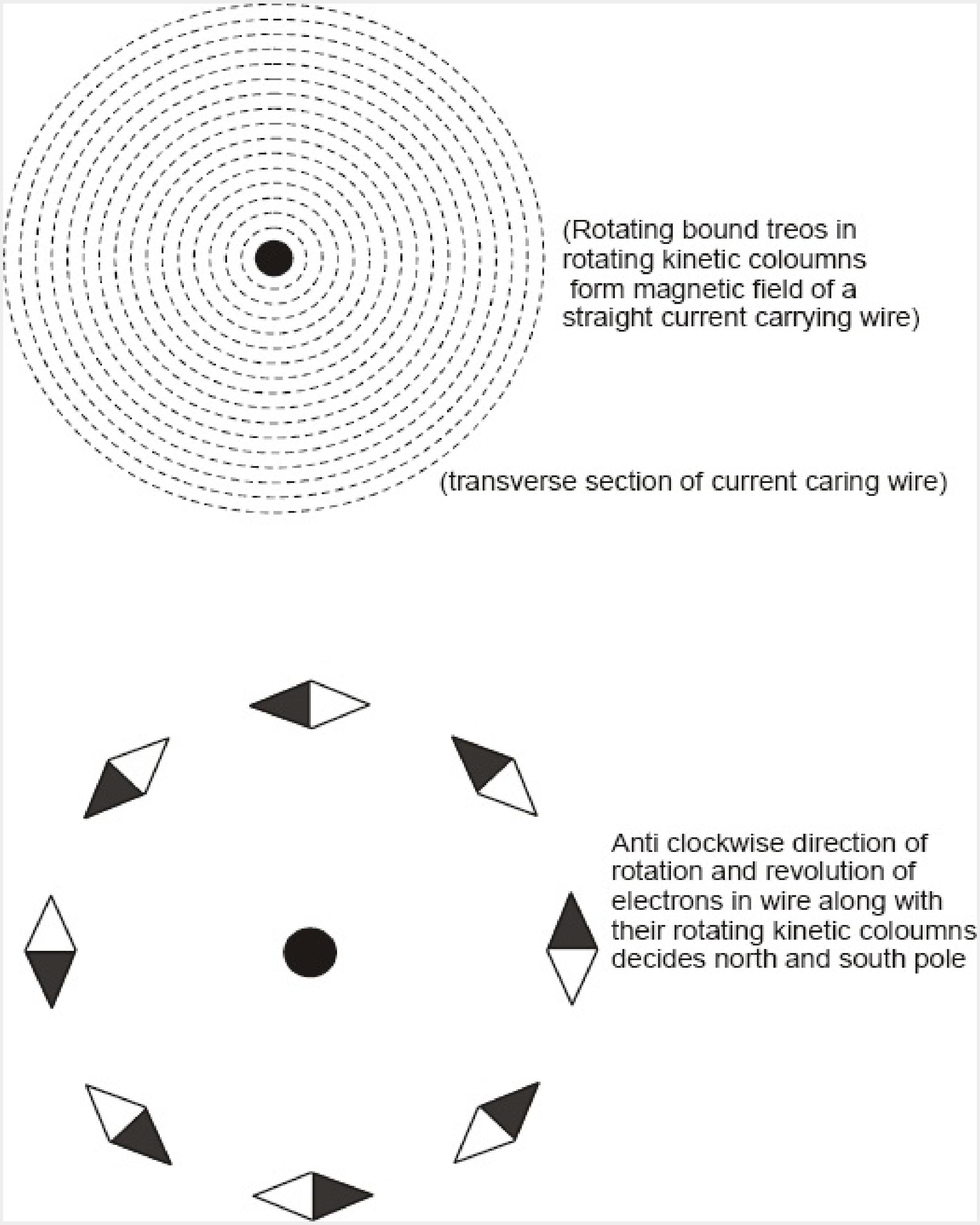
The electric field is produced by a scalar source i.e. electric charge (or number of electrons) which is specified in some units by their number, and their positive or negative charge (according the clock wise and anti clockwise direction of their spin). While magnetic field is produced by a *vector source, i.e. by a current element which has a magnitude and direction along a line element.*

The electrical field is along the radial vector joining the source and field point, the magnetic field is perpendicular to both the radial vector and to the current element vector.

Flow of kinetons or bound treos in rotating kinetic coloumns produces magnetism. The magnetic field generates along the path of rotating layers of kinetic coloumn in moving electron (charged) particle.

The magnetism is a visible proof of existence of kinetic coloumns. When you plot magnetic lines of magnetic forces by iron dust and a bar magnet, these lines depict the rotating layers of revolving kinetic coloumns. The magnetism is due to the motion of bound treos (magnetons) in the rotating and propelling layers of sub kinetic coloumns (shells), pushing a central charge (an electron) along it axis. The rotation of coloumns is not only responsible for spin of electron but after its each rotation they push electron (in their wave packets) by one bound treo in a linear (orbital) motion. (D.3.26).

Both magnetic and electric field strength reduces inversely by the square of distance, between source and the 'any point' in the field. This type of dispersion of strength of magnetic forces proves proposed coloumn geometry.


(Rotating bound treos in rotating kinetic coloumns form magnetic field of a straight current carrying wire)
(transverse section of current caring wire)
Anti clockwise direction of rotation and revolution of electrons in wire along with their rotating kinetic coloumns decides north and south pole

Magnetic field produced in long current carrying wire

Diagram 3.26 : Rotating Kinetic coloumns form magnetic field

The spin of moving electrons and the direction of rotation of their kinetic coloumns, results in the flow of kinetons (magnetrons) which create two poles of magnet. The polarity of magnet is decided by direction of rotation of kinetons (kinetons in kinetic coloumn are deformed bound treos and can be named as magnetron) while magnetic pull or push is exchange forces generated by exchange of magnetrons. These kinetons (magnetrons) rotating with rotating kinetic coloumns and entering from south pole of magnet (e.g. of Earth) seem to be rotating clockwise (e.g. in rotating kinetic coloumns of cosmic body Earth along with charged particles in magnetosphere of rotating earth) and when they exit from north pole they appear to be rotating anti clockwise. The lines of magnetic forces are always closed loops (unlike electric charge where these lines merge at a point charge). Thus mass-energy (charge) is distributed along radius of a circle while magnetic fields are formed in the range of rotation of kinetic coloumns which revolve along circumference of this circle.

The increased density of magnetic lines (quantum levels) denotes the increased strength of magnetic field, as it denotes concentration of deformed layers in kinetic coloumns at higher quantum levels. Like all other forces smaller fields merge to produce larger fields, the magnetic fields produced by beam of electrons or charge particles merge to produce bigger fields with denser magnetic lines of forces.

The force of magnetism goes on increasing with the rate of rotation of charge particle, which is again governed by the height of all sub kinetic coloumns or in other words by the number of layers in all sub kinetic coloumns present in wave length) at higher quantum level (one new layer deformed at each next higher quantum level results in increased momentum of particle).

The opposite spins of paired electrons and their rotating kinetic coloumns in opposite directions will neutralize the net magnetic momentum of atom to zero. *Thus the dia magnetic substances have no atomic magnetic moment, para magnetic substances with one valance electron have one Bohr magnetron and ferro-magnetic substances (Fe, Ni, So) with their incomplete electronic shells have large value of their atomic magnetic moment.* Magnetization of a substance means alignment of its electron spin in the direction of magnetic field. (Refer chapter of magnetism 'Inside A Wave', 2005 Manas Prakashan.)

Heisenberg's Uncertainty Principle

All elementary particles are not point masses, but they are mass-energy packets which spread on their fixed wave lengths, and invites uncertainty

It is axiom in physics that particles are considered 'point masses' and we talk about their position and velocity which can only be measured in the range of the value of reduced Planck's constant ($\hbar$).

Both the speed and position of a particle can not be measured accurately (as the effort of measurement of one value will alter (change) the value of other in the range of reduced Planck's constant, according to the formula $\Delta X \times \Delta p = \hbar/2$*)*

But according to the treo model, the mass-energy (free treos) of all elementary particles spreads uniformly on its wavelength and so particle is not a point mass but have a proper length equal to its reduced Compton wavelength (number of sub kinetic coloumns) and its speed is equal to its frequency (number of layers in these sub kinetic coloumns). Thus its speed (number of bound treo layers in each shell or frequency) and position of a particle (number of sub kinetic coloumns in wave length) can only be measured in the range (frequency × wavelength) of S bound treos = ħ (h bar). Thus we get the basis of uncertainties observed in determination of position and speed of particle only in this range as described by ‘Heisenberg’s Uncertainty Principle’

It only indicates that particle can any time change its shape (with its changed frequency and wave length), it can be thick and dwarf (with increased frequency and speed of revolution, but reduced wave length, it increases uncertainty of position) and thin and long (with reduced frequency and increased wave length it increases uncertainty of speed) with in range of S bound treos = ħ (h bar).

Weak Forces

Wave motion (Motion of each one free treo after its riding on one bound treo) of W & Z bosons transports alpha, beta particle and gamma photon

Weak forces are responsible for formation of nuclear structure and for radioactivity of atoms. Radioactive elements, radiate alpha, beta particles and gamma photons from atoms due to weak forces. The bosons responsible for weak forces in atom are W +, W – and Z bosons.

To move the heavy loads of Alpha (a sub nuclear unit having four nucleons) and beta (energetic and condensed unit electron mass) particles mass-energy of these particles spreads on its carrier kinetic coloumns of W +, W – and Z bosons, as one free treo on one bound treo in kinetic coloumn of these bosons {of very short (wave) length i.e. 10^{16} bound treos}.

These sub kinetic coloumns which form W and Z bosons having integral spins are extension of first dimensional deformation in second dimension and so W +, W – and Z bosons are not much different from photons except they are formed at 10^{27} th quantum level [W boson of 80 GeV and Z boson of 90 GeV With 10^{27} quanta as their mass-energy, and 10^{27} frequency (equal to layers in each sub kinetic coloumn) and 10^{16} apex bound treos in wave length decides range of action of these boson well inside the boundary of an atom].

The alpha particle disperses as one free treo on one bound treo and thus neutralizes their respective charge and then these W +, W – and Z loaded bosons, can carry the mass-energy of alpha and beta particle in wave motion, and can thus cross the nuclear and atomic barrier along with its (riding) load. (Quantum tunneling D.3.9).

As W +, W – and Z bosons have charge and formed in second dimensional deformation they can not accumulate in increasing numbers; thus the weak forces remain weak while due to side by side merger of the fields of all uncharged photons in a photon beam, the EM forces can become very strong.

Why electron does not fall in towards proton in nucleus

The momentum of electron can never match the momentum required to jump to this higher quantum level of nucleons

The ‘load’ of electron on space-matrix, can deform only up to 10^{22} sheets in depth in the deformation of second dimension. It can not sink up to the level of nuclear deformation of 10^{26} sheets in depth (which are deformed by heavy nucleons).

So the electron can not sink up to the deformations produced by nucleons, but floats at a gap of 10,000 or10^4 quantum levels away from nucleus (it is a gap of 10^4 bound treo distance between position of electron and protons . As Electrons are at 10^{22} quantum levels at which electrons are present, to 10^{26} quantum level of nucleons in one full kinetic /unit gravitational coloumn.

The momentum (increased kinetic energy) which is required to shift electron from 10^{22} quantum level to 10^{26} quantum level is far more, then the force of attraction between opposite charges of electron and proton.

Atomic Energy

Energy of all kinetons supporting mass energy of all nucleons and its localizing energy

As the load increases in quanta by square of number of quantum level, from one quanta load (1 S free treos) of one unit electron to ‘S quanta load of a ‘unit mass’. More and more layers in shells (rotating sub kinetic coloumns) are proportionately recruited, till the biggest mass energy packet (S quanta) which can be supported by second dimensional deformation. So that each point (apex bound treo) in atomic field in this deformation achieves one quanta (or s kinetons in each orbitum) as its ground energy.

This ‘converted enormous kinetic energy’ in the condensed world of ‘atom’ is named as ‘Atomic energy’.

This deformation in second dimension produces separate ‘whirlpool like deformations’ of many De Broglie’s matter waves to support each particle may be ‘electron’, ‘neutron’ or of ‘proton’ in atom. These deformations combine with localization energy and produce vast ‘Atomic energy’ in bigger atomic configurations and in radio active atoms.

At 10^4 th and 10^5 quantum level of second dimensional deformation (at which these atomic structures are formed) the mass energy condenses and concentrates while ‘load’ expressed in quanta, increases by square of quantum level $(10^5)^2$, and a very condensed energetic atmosphere is produced by supporting kinetic energy generated in response to this load. These kinetons (from deformed space-matrix) along with great amount of localization energy (gluon structures) at higher quantum levels can produce havoc as released surplus atomic energy [9] in atomic fusion or in atomic fission while forming new atomic configurations.

We must also realize at this point that same amount of atomic energy can be released (even without disintegration of nucleons packets) alone by disintegration of the kinetic coloumns of nucleons, as equal amount of kinetic energy supports these nucleons.

Energy Distribution at Atomic Quantum Levels

With increasing load at nucleus due to *increasing number of protons (along with increase of atomic number Z)*, the deformation of space-matrix limited in atomic area produces quantum levels which increase in integral numbers. This diluted mass pressure of nucleus disperses at periphery and genrates kinetic energy by adding sub shells and orbits, in extended atomic field of atom and can be well understood by the example of K, L, M, N energy levels of atomic energy in ‘Hydrogen like elements' (D.3.27)

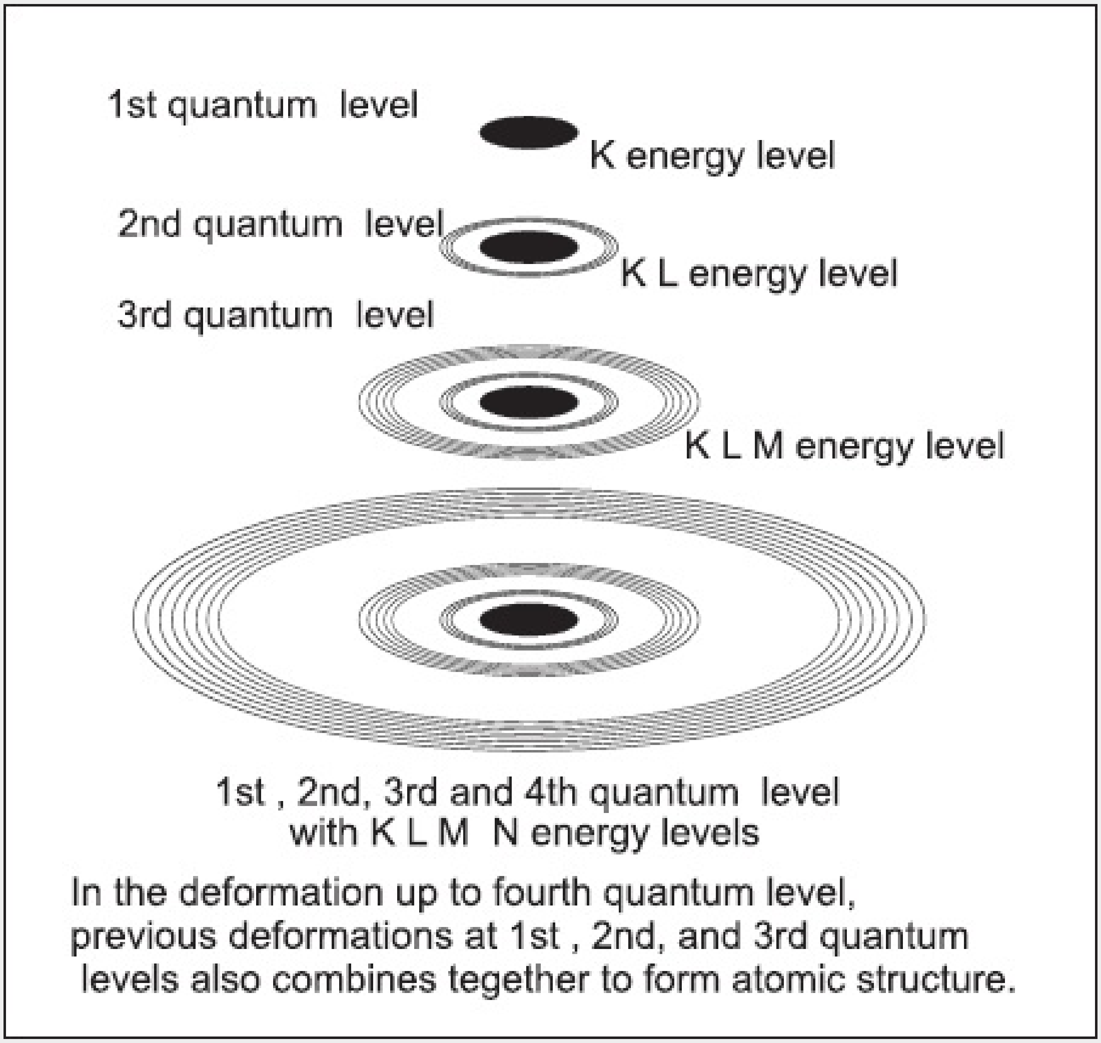

1st quantum level
K energy level
2nd quantum level
K L energy level
3rd quantum level
K L M energy level
1st , 2nd, 3rd and 4th quantum level
with K L M N energy levels
In the deformation up to fourth quantum level,
previous deformations at 1st , 2nd, and 3rd quantum
levels also combines tegether to form atomic structure.

Diagram 3.27 : Energy in Sub Shells

The nuclear mass is supported by atomic field as per coloumn geometry of second dimensional deformation. Each one quanta load is supported by one orbitum with 2n–1 orbitums in n th sub shells of a shell. All identical energy orbitums (arranged vertically one over other) in wave length join to form one orbit.

e.g. At first atomic quantum level, there is only (first)one sub shell in each shell at K energy level, the kinetic energy (E_1) is one quantum in each orbitum. All these orbitums in R C wave length join to form one orbit i,e. s orbit.

At second atomic quantum level kinetic energy E_2 increases to four quanta to support 4 quanta load which disperses in two sub shells to be supported by total 4 orbitums (contained in these two sub shells). Thus 4 quanta energy in one s orbit at K energy level and one quantum ($E_2/4$) kinetic energy in each of three p orbits at L energy level.

The load increases to E_3 (9 quanta) at third atomic quantum level, which disperses to be supported in three sub shells by 9 S (9 quanta) kinetons in total 9 orbitums. All identical energy orbitums of the R C wave length join to form one orbit.

E_3 or 9 quanta energy at K energy level in s orbit, 4 quanta kinetic energy at second sub shell in three p orbits at L energy level and one quantum kinetic energy (E_3 / 9) is in five d orbits in third sub shell at M energy level.

Similarly at fourth atomic quantum level kinetic energy becomes E_4 (16 quanta) to support 16 quanta load, which disperses to be supported in four sub shells by 16 orbitums. This load is supported at K energy level by 16 quanta kinetic energy, at L energy level by 9 quanta kinetic energy, at M energy level by 4 quanta kinetic energy respectively in one s, three p, five d orbits and at N energy level it is one quantum (or $E_4/16$) in seven f orbits.

Thus the ‘diluted mass pressure’ of nucleus is supported on space-matrix as one quanta mass energy per orbitum and identical energy orbitums of all the shells in RC wave length of any atom join to form orbits of sub-shells.

The magnitude of deformation (or Atomic energy) En is calculated as K, L, M, N energy levels at four quantum levels in nucleus.

And so on, we can note that total kinetic energy En at nucleus disperses on increasing number of orbits in each sub-shell.

If, E is total energy in its one ‘K’ shell contained in just one s orbit in one sub shell.

L shell also has total E energy (4 orbits × E/4) as it is E/4 in each of its all four orbits present in two (s, p) sub shells.

Similarly ‘M’ also has total E energy (9 orbits × E/9) and it is E/9 in each of its all nine ‘orbits’ present in three (s, p, d) sub shells and so on ….

$E_n = -$ Constant Z^2/n^2 is conventional formula used for this energy calculation. (Here Z is atomic number and n is the energy level at which the energy is being calculated)

Thus in all atoms with their increasing size, the energy increases by ‘square of nucleon number’ multiplied by constant (2.178×10^{-18} J) and is distributed in sub shells according to proposed coloumn geometry as described above.

According to above formula at third quantum level energy for Hydrogen like atoms.

$En = -2.178 \times 10^{-18} Z^2/n^2$ *J per atom*

s_3 *(K Energy level):* $= 1.312 \times 10^3$ *kJ mol – 1= it is E*

p_3 *(L Energy level):* $= 3.28 \times 10^2$ *kJ mol – 1 = is E/4*

d_3 *(M Energy level):* $= 1.46 \times 10^2$ *kJ mol – 1 = is E/9*

Total energy E is equal to the mass pressure of all nucleons at nucleus. [10] When load increases from one to four times and then up to nine times along with the increasing extent of deformation of space-matrix the area of deformation forming atomic structure also increases from 1 to 4 times and then 9 times and so on, along with proportionately increasing amount of atomic energy. It results in increase in number of sub shells and orbits in the second dimensional deformation. The increasing load in bigger atoms is supported on decreasing RC wavelength and gradually thickening shells (increased frequency and bound treo layers in each shell).

Thus there is uniform spread of atomic energy at each quantum level (produced by the total deformation of space-matrix;) as shells having one, two or three sub shells (named as s, p & d sub shells and so on) formed in bigger atoms of increasing size due to increased ‘load’ at nucleus. Hence the total kinetic energy in all orbitums present in all shells can support the total mass of nucleus at the center. Central ‘load’ is supported at each one bigger shell of atomic coloumn in atomic field.

The same general deformation pattern is followed in Gravitational fields, and it is similar as each layer of gravitational coloumn of any cosmic body can support its total 2 MG load , by its kinetic energy distributed on all sub kinetic coloumns which form this one layer (orbit) of gravitational coloumn (field) of body.

The atomic fields and their energy distribution again verifies this proposed model and proposed pattern of second dimensional deformation.

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1. Orbitums can be seen in nature : In low gravitational kinetic energy field of Sun the Saturn condenses as gas. In gravitational coloumn of Saturn its gases mass of body fills its (own) total three dimensional deformation, and even extend in two dimensional deformation produced by its own gravitational field. In this second dimensional deformation the solid masses starts

condensing as its satellites at 10^4 quantum level . Some satellites condenses inside the rings of Saturn. Rings of Saturn are formed by condensation of small masses (icy dust) in all orbitums and orbitals (each orbital form by union of all orbitums present in wavelength) which forms in second dimensional deformation in gravitational coloumn of Saturn. Total orbitums formed are equal to the 'number of quanta mass-energy in Saturn'. These orbitums form in sub shells, which are named as 'D S B A F G & E rings of Saturn' formed at consecutive next quantum level. (also see Position of Planets on link and Configuration of Planets on link).

2. The angular momentum L is an integer multiple of λ, as reinterpreted in 1924 by de Broglie and a standing wave condition; the electron is described by a wave and a whole number of wavelengths must fit along the circumference of the electron's orbit : $n\lambda = 2\pi r$

3. Graviton with S^2 kinetic energy (and no mass) will have S^2 bound treos as its range of action. It can serve as relay towers for gravitational signals of all cosmic bodies.

4. Similarly point mass of Earth (while pushed in its orbit) is also shifted up and down to move planet Earth up and down from its ecliptic plane (north or south i.e. Uttrayan and Dakshirayan) while it completes its one revolution (oscillation) in its orbit in one year.

5. We have earlier noticed that 'all the physical and chemical properties of all elements of periodic table depends on the 'pattern and number of electrons in their outermost electron layer' i.e. on the size and pattern of deformation of space-matrix produced by outer most orbit of valance electrons in an atom.'

6. Free Neutron is unstable in terrestrial environment and gets converted into a pair of Proton and Electron in 14.6 minutes. While half life of free Proton is 10^{31} years.

7. Higgs mechanism— *Photons while moving in space-matrix passes unnoticed, while particle some how drags some part of space-matrix along with its motion.*

> The treo model excepts Higgs Mechanism, but it does not support as such, to newly discovered Higgs boson (of 125 GeV). 'But some how the name 'Higgs boson' can be labeled to big sub kinetic coloumns (similar to the deformations which form W & Z bosons) which act as 'localization energy' (as Gluon) and wraps the rest mass-energy of multiple unit electron masses to produce 'composite elementary particles'

8. Pauli's Exclusion Principle. There can not be two electrons, which have same all four quantum numbers; thus at least fourth spin quantum number will differ, with one electron having + spin other – ve spin.

9. The frequently observed phenomenon of 'Gamma ray burst' i.e. showers of gamma ray radiation form all around on Earth for minutes together, can be attributed to the formation of gamma photons from disintegration of kinetic coloumns of gravitational fields of collapsing supernova or of 'white dwarfs' which may extend even up to Earth and beyond it (this view is being proposed by the author).

10. The same general deformation pattern is followed in Gravitational fields where total kinetic energy on all sub kinetic coloumns in any one layer in gravitational field (coloumn) is always equal to 2 MG of cosmic body.

> Conventionally the wave function (ψ) i.e.'v' have no significance and signifies the amplitude of wave while (ψ^2) (which is 'v^2' kinetons according to the treo model and denotes 'kinetic energy component' of the field) denotes the 'charge or energy density' and determines the 'probability distribution' of electrons in traditional physics.

But according to this proposed model ‘v’ represent the amplitude of wave and denotes the number of layers (or height) of sub kinetic coloumn in legend field (gravitational coloumn or atomic coloumn) of parent body and v^2 is ‘kinetic energy component’ which determines the total number of deformed ‘bound treos’ (kinetons) in one sub kinetic coloumn in any layer of its gravitational coloumn. The linear probability of finding on electron (or a planet or satellite in legend gravitational field) at a place is according to expression (probability factor × volume of shell) while probability factor in the treo model is represented by ‘kinetic energy component’ of wave v^2 or (ψ^2) and the volume of shell depends on the number of sub shells (layers) in a particular shell (sub kinetic coloumn).

The Schrödinger’s equations for motion of a linear harmonic oscillator’ basically describes this structure of kinetic coloumn and equates to the kinetic energy at ‘quantum levels.’

▣ ▣

THIRD DIMENSIONAL DEFORMATION OF LENGTH, BREADTH AND DEPTH OF UNIT SPACE-MATRIX

This chapter will explain :

Support of multiple unit masses bodies, Unit Gravitational center, start of formation of Gravitational fields.

Key Parameters in Deformation of Unit Space-matrix in Third Dimensional Deformation

Number of quantum levels in third dimension = √S

Unit of mass-energy increment in third dimensional deformation = One Unit mass increases at each next quantum level.

Total mass energy at any quantum level = (Unit of increment of this dimension × quantum number).

Mass-energy limits = From unit mass (10^{-8} kg) to √S unit masses (approx. 10^{13} kg)

Geometry of deformation = ‘Electron Black Hole’, increasing circles (layers) in one electron black hole, 2n–1 gravitons in each nth circle.

Load exerted at gravitational center (at tip of kinetic coloumn of third dimension) increases in ‘square of unit masses in body’ as this body is supported from increasing number of plains. = Mass energy × Frequency.

Angular deformation of gravitational wave = Increasing angular momentum which rotate electron black hole with each new wrapping of full kinetic / Unit gravitational coloumns in each circle from 180º to 270º i.e. [180° + (quantum number / √S) × 90°]

Wavelength = Wave length increases from one graviton in first circle to √S gravitons at √S quantum level.

Frequency = Number of unit masses in body = Number of layers in electron black hole.

Ground energy in third dimension = S^2 kinetons which act at one graviton.

Wrapping of S number of sheets to generate S^3 kinetons energy

Deformation of unit space-matrix in all three dimensions of space is the story of formation of kinetic energy from S^2 kinetons to S^3 kinetons. The deformation of unit space matrix in all dimensions of Space (Length, Depth and Breadth) forms one *'Electron Black hole'*.

Wrapping of S number of full sheets of one unit space-matrix according to coloumn geometry, (with still increasing mass energy of one unit mass at each of √S quantum levels), where each sheet have S^2 bound treos and can individually form one 'full kinetic /unit gravitational coloumn'.

The deformation at √S quantum levels in length for all photon packets and again at √S quantum levels in depth for all elementary particles in second dimension completes with the formation of 'one full kinetic/ unit gravitational coloumn', which supports 'one unit mass', at its 'one unit gravitational center, which have been identified as one graviton in this treo model.

One unit mass is the maximum 'load' which can be supported at one bound treo of space-matrix i.e. at one graviton or 'unit gravitational center' by 'one full kinetic / unit gravitational coloumn'. This one 'full kinetic / unit gravitational coloumn' is made up of S^2 kinetons. This kinetic energy of S^2 kinetons can be produced by complete deformation of even one last layer (one page of book) of one unit space-matrix which have S^2 bound treos which can be deformed as S^2 kinetons.

The body made up of multiple 'unit masses' exerts it mass pressure in all plains and is supported from all plains., The load exerted at the gravitational center of body which is 'square of number of unit masses' in body and to support this load square number of gravitons (along with their full kinetic / unit gravitational coloumns) are required. To support the mass pressure of body at its gravitational center.

Load at gravitational center in third dimensional deformation = Square of unit masses contained in the body = Mass × Number of bound treo layers in kinetic coloumn i.e. frequency.

Thus by total deformation of one unit space-matrix, one '√S unit masses body’ with its ‘load’ of S unit masses, is supported at S gravitons arranged in one ‘√S layered kinetic coloumn’ of third dimensional deformation at its ‘√S quantum levels’ in spiral circular layers. The wave length increases from one bound treo at first quantum level of three dimensional deformation to 2√S –1 bound treo according to proposed ‘coloumn geometry’ and is named as one ‘Electron black hole’.

We have noted that unlike the deformation in first and second dimension where the increasing mass-energy gradually shrinks on its gradually reducing (wave) length, in third dimension. with ‘each increase by ‘one unit mass’ in body, at each of √S quantum level in third dimension, its ‘load’ increases as ‘square of number of unit masses in body’ at gravitational center of body, and is supported by successively bigger n^{th} layer of gradually increasing wave length (2n–1 apex bound treos in wave length have 2n–1 gravitons and their supporting coloumns) at n th quantum level in third dimensional deformation.

Thus dilution of load at gravitational center of this body of ‘square of number of unit masses in body’, occur on square number of gravitons, present in one spiral circular kinetic coloumn’ of increasing radius (without the presence of actual mass-energy as real ‘load’ on these apex bound treos in wave length).

This increase of size of circle of one kinetic coloumn of third dimension and the process of generation of gravitational kinetic energy (in response to diluted mass pressure of body at each point in field, without any actual mass energy present on any apex bound treo) at a distance by any multi unit mass body is the start of formation of gravitational fields.

In ‘one unit space-matrix’ there are S^3 bound treos, and out of which only S^2 bound treos (or one page of book) is deformed to complete one full kinetic / unit gravitational coloumn in two dimensional deformation. In principle, total number of S^2 bound treos which are present in one sheet (or one page of book) can form one ‘full kinetic unit gravitational coloumn’ at one graviton..

Thus the total of S sheets (S pages) or ‘S gravitons along with their S full kinetic /unit gravitational coloumns’ will be wrapped at $\sqrt{S}$ quantum levels to form one ‘electron black hole’ which is conversion of these S^3 bound treos in unit space matrix into S^3 Kinetons.

Here 1, 3, 5, 7....(or 2n–1) gravitons and their full kinetic /unit gravitational coloumns which come from 1,3, 5, 7... ,(or 2n–1) sheets of unit space matrix (like pages of a book) are deformed and wrapped at 1st, 2nd, 3rd and 4th or n th quantum level respectively.

These 2n–1 gravitons at each nth quantum level will join to form one spiral circular layer of kinetic coloumn, of one ‘electron black hole’. Thus the $\sqrt{S}$ layers of ‘electron black hole’ are formed at $\sqrt{S}$ quantum levels and in these layers total S gravitons (with their S number of ‘full kinetic /unit gravitational coloumns’ from S sheets of unit space matrix) will be wrapped to form one full ‘electron black hole’.

Increasing wave length frequency and load in third dimension

2n–1 gravitons on 2n–1 apex bound treos is RC wave length in any n th layer of electron black hole. Thus at each next n th quantum level in n th layer the wave length increases in third dimension. The wave length increases from one bound treo (one graviton) in first layer to $2\sqrt{S} - 1$ bound treos (and $2\sqrt{S} - 1$ gravitons) in last layer of one electron black hole, while the coloumn rotates from 180° to 270°.

Frequency of wave is decided by number of layers deformed.. With each increase of one unit mass energy at each next quantum level one layer is added and frequency of wave increases by one, while the load increases in square of unit masses (mass energy at quantum level × frequency)..

At each next quantum level the angular momentum increases by one unit [$180^{0} +$ (quantum number / $\sqrt{S}$) × 90°]

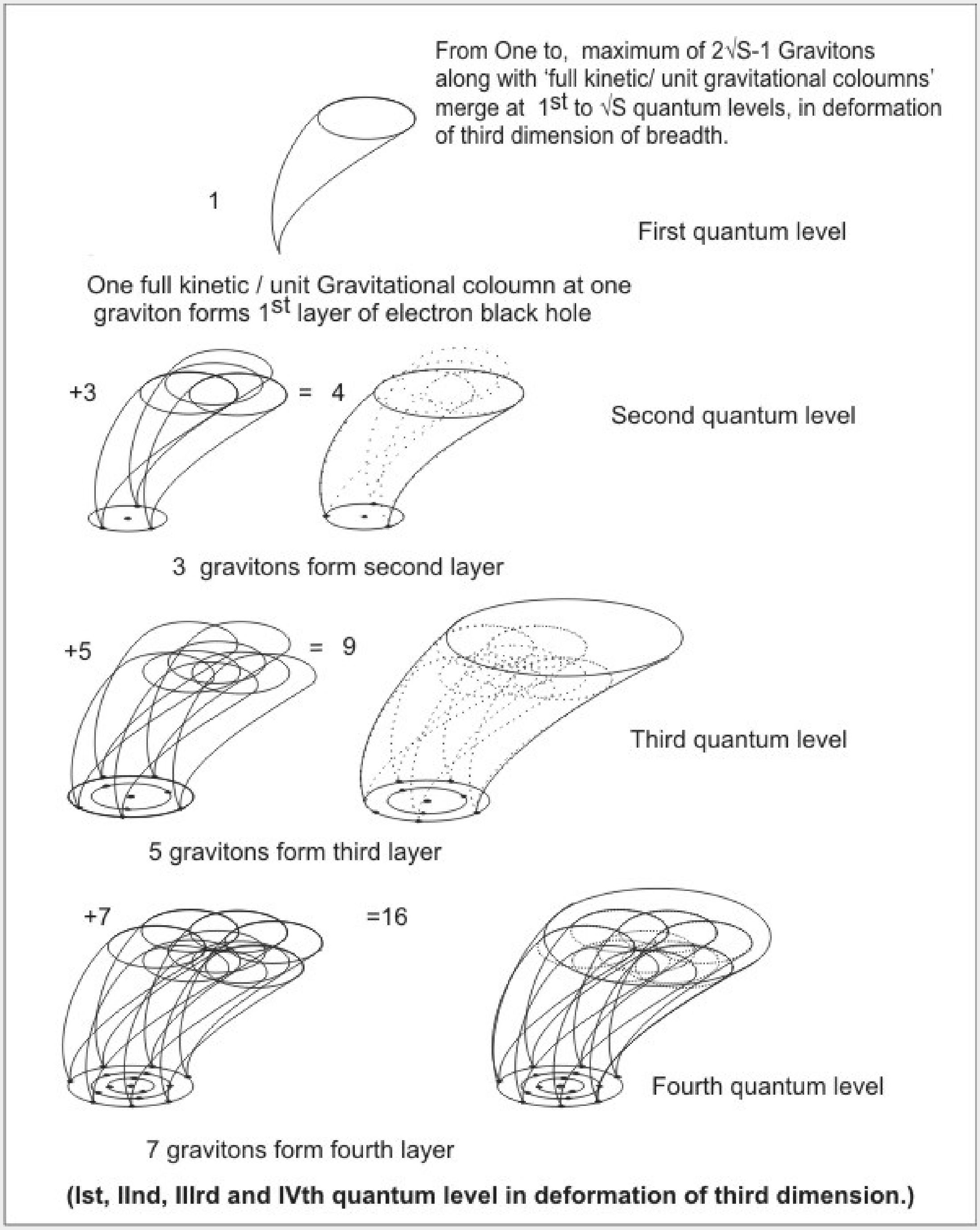
Formation of ‘Electron Black Hole’

One unit mass body is supported at one graviton (or one ‘unit gravitational center’) by one ‘full kinetic / unit gravitational coloumn’ which is produced by deformation of S^2 bound treos (equivalent to ‘complete deformation of one last sheet of one unit space-matrix’) and is wrapped as first layer at first quantum level of third dimension.

But when mass increases to ‘two unit masses’, (the load is 4 unit masses) the additional 3 unit masses ‘load’ is supported at additional ‘3 gravitons’ (2n–1 gravitons in n^{th} layer of circle at n^{th} quantum level) in this second layer or second spiral circle along with wrapping of 3 more ‘full kinetic/unit gravitational coloumns’ as three peals of a sheaths at second quantum level of third dimension .

These (1 + 3) 4 gravitons along with 4 ‘full kinetic / unit gravitational coloumns, [which come from full deformation of last 4 sheets (pages) of the cube of one unit space-matrix] are placed in two concentric circles (layers) of this kinetic coloumn of two layers of ‘electron black hole’. (D.3.28 : Circular deformation increasing along breadth to form electron black hole)

When mass-energy in body increases to ‘three unit masses’ at third quantum level its load (in square of unit masses) becomes 9 unit masses. This central load spreads on 9 gravitons in three concentric spiral circles (layers) of this kinetic coloumn of ‘electron black hole’ according to the coloumn geometry (1 + 3 + 5 = 9), and is supported by total 9 full kinetic / unit gravitational coloumns. up to third quantum level. This is equivalent to 9 full sheets (9 full pages of book) of ‘one unit space-matrix’ deformed and wrapped as concentric spiral arms. This third dimensional deformation l continues and additional 2n–1 sheets are deformed and wrapped at any n^{th} quantum level to form n^{th} layer of circle of ‘electron black hole’.



From One to, maximum of 2√S-1 Gravitons along with 'full kinetic/ unit gravitational coloumns' merge at 1^{st} to √S quantum levels, in deformation of third dimension of breadth.

One full kinetic / unit Gravitational coloumn at one graviton forms 1^{st} layer of electron black hole

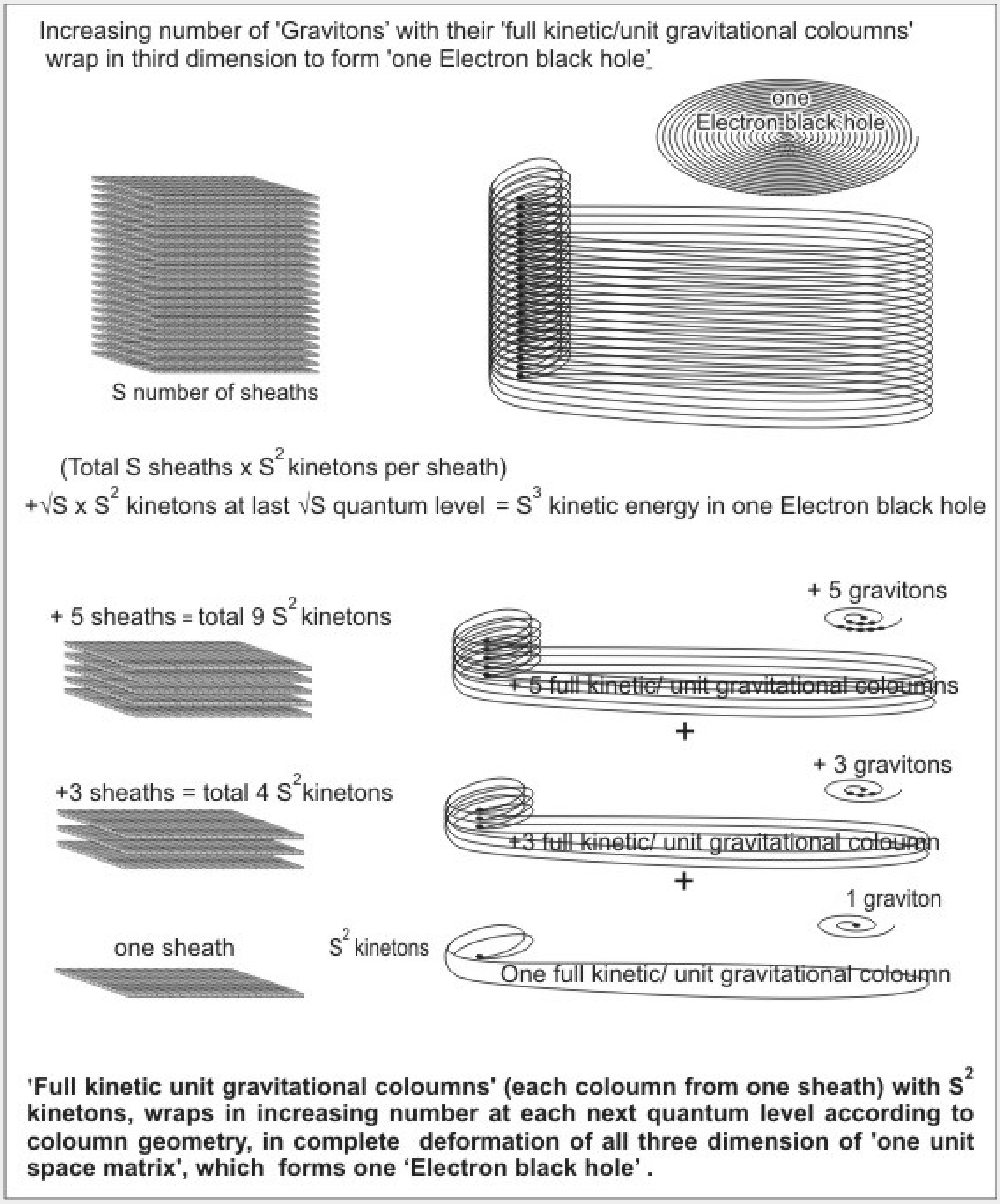
3 gravitons form second layer

5 gravitons form third layer

7 gravitons form fourth layer

(Ist, IInd, IIIrd and IVth quantum level in deformation of third dimension.)

Diagram 3.28: Circular Deformation with contraction breadth to form Electron Black Hole


Increasing number of 'Gravitons' with their 'full kinetic/unit gravitational coloumns' wrap in third dimension to form 'one Electron black hole'
one
Electron black hole
S number of sheaths
(Total S sheaths x S^2 kinetons per sheath)
+√S x S^2 kinetons at last √S quantum level = S^3 kinetic energy in one Electron black hole
+ 5 gravitons
+ 5 sheaths = total 9 S^2 kinetons
+ 5 full kinetic/ unit gravitational coloumns
+
+ 3 gravitons
+3 sheaths = total 4 S^2 kinetons
+3 full kinetic/ unit gravitational coloumn
+
1 graviton
one sheath
S^2 kinetons
One full kinetic/ unit gravitational coloumn

'Full kinetic unit gravitational coloumns' (each coloumn from one sheath) with S^2 kinetons, wraps in increasing number at each next quantum level according to coloumn geometry, in complete deformation of all three dimension of 'one unit space matrix', which forms one 'Electron black hole'.

Diagram 3.29 : Formation of Electron Black Hole by Wrapping of S sheets of unit space-matrix (to accumulate S^3 kinetic energy)

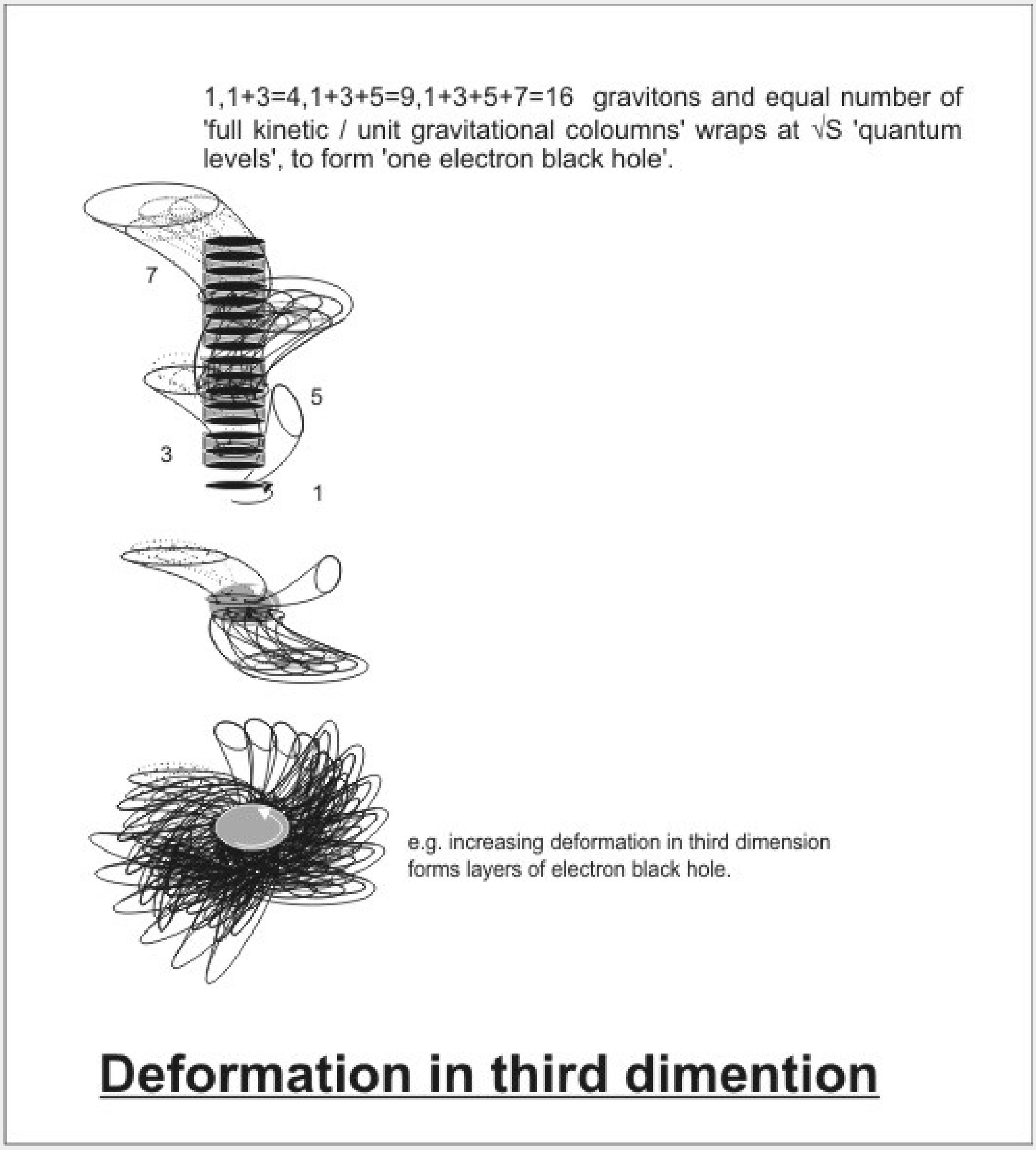
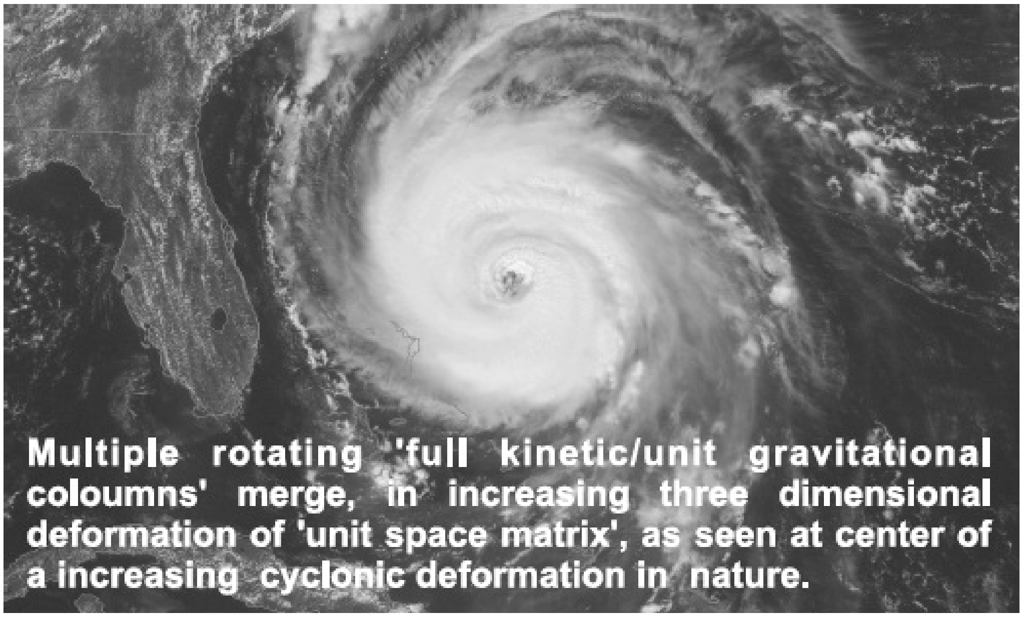

1,1+3=4,1+3+5=9,1+3+5+7=16 gravitons and equal number of 'full kinetic / unit gravitational coloumns' wraps at √S 'quantum levels', to form 'one electron black hole'.
7
5
3
1
e.g. increasing deformation in third dimension forms layers of electron black hole.
Deformation in third dimention

Diagram 3.30 : Cyclonic Deformations

Finally with the addition of one more unit mass; 2√S–1 gravitons along with its 2√S–1 'full kinetic /unit gravitational coloumns' are wrapped at last √S quantum level of third dimension to complete the formation of ‘one electron black hole’.

Thus all S sheets of ‘one unit space-matrix’ are wrapped in √S layers (circles) of an ‘electron black hole’, according to the coloumn geometry.



Multiple rotating 'full kinetic/unit gravitational coloumns' merge, in increasing three dimensional deformation of 'unit space matrix', as seen at center of a increasing cyclonic deformation in nature.

CENTER OF A CYCLONE SHOWING ITS ‘EYE’

(example of third dimensional deformation of unit space matrix)

Diagram 3.31: Eye of a cyclonic deformation as seen in a satellite picture

‘Cyclonic deformation’ in nature is three dimensional deformation of space-matrix

The complete deformation of one unit space-matrix deforms all its S^3 bound treos. (D.3.29). Along with already acting two vectors of first and second dimension, one in length (contraction of length), other in breadth (contraction from breadth), the third vector by contraction from depth also starts increasing with the wrapping of 2n–1 gravitons in each n^{th} new layer in kinetic coloumn (and results in contraction of body from all around) with each increase of one unit mass in the body . No body is present at the center of cyclonic deformation but load is present which is generated by known forces needed to form this cyclonic deformation. (D.3.30 : Cyclonic deformations).

One kg mass is made up of '10^8 unit masses' (or of 1.58×10^{94} free treos) and it exerts a load of $(10^8)^2$unit masses, which is supported at $(10^8)^2$ gravitons by their $(10^8)^2$'full kinetic/ unit gravitational coloumns' in one 10^8 layered kinetic coloumn of third dimension.

Finally to support √S unit masses body (of approximately 10^{13} kg) one complete 'electron black hole' of √S layered kinetic coloumn is formed by complete deformation of one unit space-matrix in all three dimensions of space. This Electron black hole will have kinetic energy of 3.6283×10^{52} Joule (kinetic energy of one graviton1.956×10^9 J × S number of gravitons1.855×10^{43}).

In nature this increasing deformation of space-matrix in third dimension of breadth with the wrapping of the sheets of unit space-matrix can be visualized in the satellite picture around eye of a cyclonic deformation. (D.3.31)

DEFORMATION OF TIME ALONG WITH DEFORMATION OF MULTIPLE UNIT SPACE MATRICES OR DEFORMATION IN ALL FOUR DIMENSIONS OF SPACE - TIME

This chapter will explain

Formation of Gravitational spheres and Unit black holes, Gravitational fields and Gravitational attraction.

Key Parameters in Deformation of Space-Matrix in all Four Dimensions of Space-Time

Number of quantum levels in deformation of fourth dimension = √S quantum levels.

Unit of increment of Fourth dimension = √S unit masses, or mass energy supported by ‘one electron black hole’ increases one by one at each of √S quantum levels of fourth dimension. Size of gravitational sphere increases in radius by √S bound treo layers at each of √S quantum levels.

Mass energy can be calculated at any quantum level = (Unit of increment of this dimension × Quantum number).

Mass-energy limits of fourth dimension are from minimum √S unit masses supported by ‘one electron black hole’, to maximum S unit masses supported by ‘one unit black hole’.

Geometry of deformation = Unit black hole i.e. biggest gravitational sphere, Electron black hole layer and Electron black hole which together form gravitational waves.

Load exerted at gravitational center (increases in square of unit masses in body as this body is supported from increasing number of plains and from increasing number of directions) , increases from S unit masses load to maximum S^2 unit masses load..= (Mass × Frequency)

Angular deformation = [270° + (quantum number / √S) × 90°] it increases from 270º to 360º in all layers of unit black hole, thus gravitational waves in gravitational sphere unwrap the wrapped mass energy packet of all matter particles, in gravitational spheres and black holes to release Hawkin’s radiation.

Wavelength = Increases from 2√S–1 gravitons in one electron black hole at first quantum level to 2S–1 gravitons at √S quantum level in S layered gravitational sphere of unit black hole.

Frequency = Number of unit masses in cosmic body = Number of graviton (bound treo layers) layers in gravitational sphere.

Ground energy in fourth dimension = S^3 kinetons present in one electron black hole.

Deformation of Space-Time to Support Cosmic Bodies

Deformation of space-time (in four dimensional deformation) is to support all cosmic bodies on space-matrix.This four dimensional deformation of multiple unit space matrices in all three dimensions of space along with deformation of fourth dimension of time, is the story of conversion of potential energy into kinetic energy, from S^3 kinetons to S^4 kinetons.

This energy act at its gravitational center to counteract, exerted load of S^4 free treos or S^2 unit masses, for S unit mass body of one 'unit black hole' in a gravitational sphere of S layers. In fourth dimension mass-energy increases in unit of 'one electron black hole' ($\sqrt{S}$ unit masses) at each of $\sqrt{S}$ quantum levels and it adds $\sqrt{S}$ bound treo layers and $2n-1$ electron black holes at n th quantum level to support load at gravitational center which increases at each next quantum level by square of unit masses.

With increase of $\sqrt{S}$ unit masses and increase of $\sqrt{S}$ bound treo layers (frequency) at each next quantum level , the load increases at gravitational center as 1S unit masses, 4 S unit masses, 9 S unit masses, 16 S unit masses and so on ...... till it is load of S × S unit masses or S^2 unit masses at last $\sqrt{S}$ quantum level to form one biggest gravitational sphere of S layers, for S unit mass body of a 'unit black hole'. (D.3.33 : Gravitational sphere). Load = mass energy at quantum level × frequency or number of bound treo layers in gravitational sphere.

As each '*electron black hole*' is of '$\sqrt{S}$ layered kinetic coloumn' and they occupy √S layers at each of √S quantum levels in kinetic coloumn of fourth dimension, they jointly will occupy (√S × √S) S layers of gravitational sphere.

In the complete deformation in four dimensions '*one unit black hole*' deforms S unit space matrices (S books) to form S layers of its 'gravitational sphere' and accommodates S^2 gravitons and S^2 full kinetic / unit gravitational coloumns (present in total S 'electron black holes') arranged according to coloumn geometry at √S quantum levels in all layers inside this gravitational sphere. Thus it can be observed that the size and radius of Schwarzschild Gravitational Sphere is increasing at the rate of one layer per unit mass and any n unit mass body can form smaller gravitational sphere of 'n layers' (D.3.35).

Thus S^3 kinetons is ground energy of fourth dimensional coloumn and S^4 kinetons (in S electron black holes) act at its gravitational center; at apex of this coloumn. (to remind; ground energy was S^2 kinetons in third and S kinetons in second and only one kineton in first dimensional coloumn) (D.3.34).

The angular momentum of wave increases by one unit in each layer [270° + (quantum number / √S) × 90°].

From a minimum load of S^3 free treos of 'one electron black hole', to the maximum 'load' of S^4 free treos of 'one unit black hole' (of S unit mass body) are supported by 'Gravitational spheres' of increasing size (D.3.35).

The frequency increases by √S with addition of √S bound treo layers in gravitational sphere at each next quantum level. Thus At last √S quantum level the frequency will be S (S layers =√S layers added at each quantum level × √S quantum levels of fourth dimension) and wave length will be 2S– 1 bound treos of unit black hole.

Multiple unit space matrices in omnipresent space matrix of universe can not deform without the deformation of Time (as it demand to break the continuity of flow of Time) Time slows down by one vibration in each layer formed in gravitational sphere by deformation of one unit space matrix.

The time slows down due to reduction by one vibration per second in each successive inner layer of gravitational sphere. Thus in case of 'unit black hole' which have one biggest gravitational sphere of S layers or 10^{43} layers, after one by one reduction of 10^{43} vibrations (which occur in one second), in all 10^{43} layers of gravitational sphere the bound treo situated at its gravitational center does not vibrate at all, and time stops at the 'center of this gravitational sphere'. This non vibrating 'gravitational center' of unit black hole is 'gravitational singularity'.

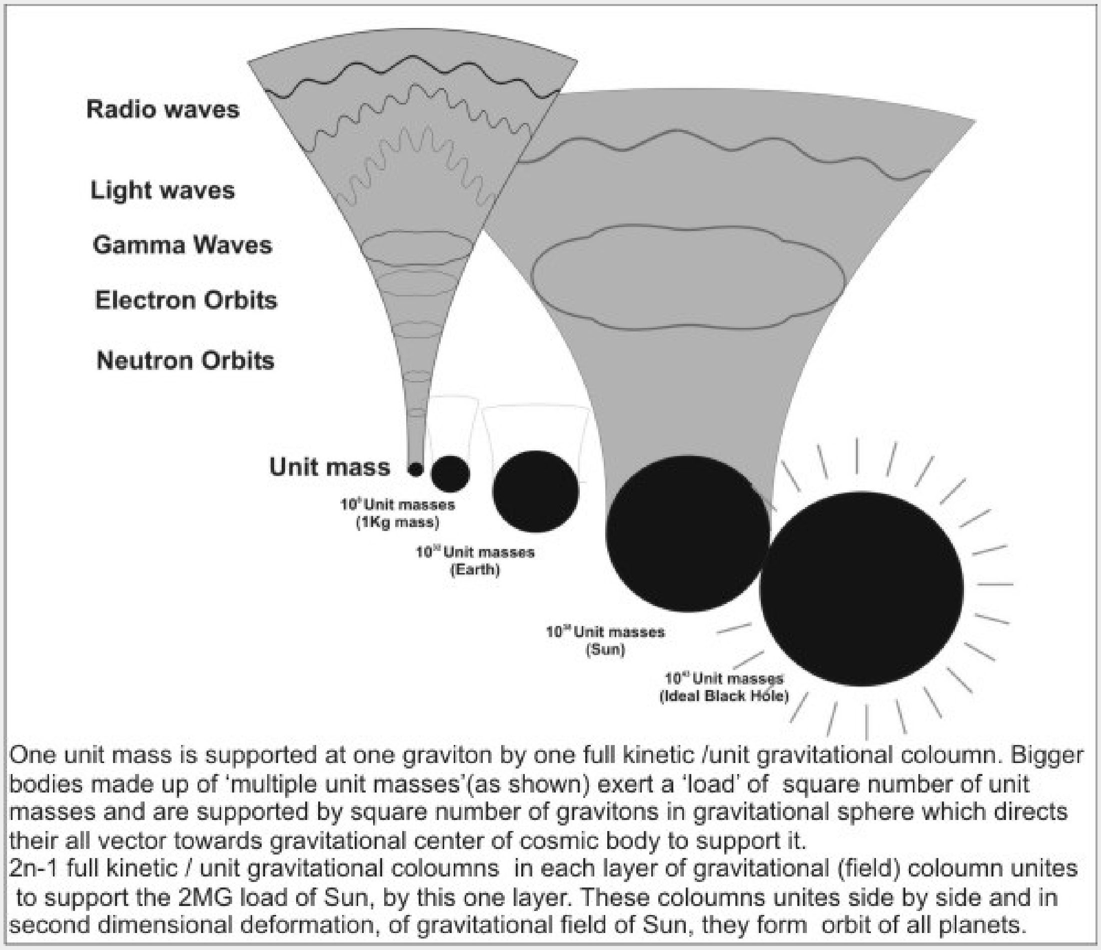
Thus all layers in this gravitational sphere rotate with gradually increasing sub-luminal speeds and its outer most layer attains speed of light at periphery of S layered gravitational sphere or ergo sphere of unit black hole.

By this deformation of time in each layer of gravitational sphere, and by their co-centric revolutions, all S^2 gravitons (along with their 'full kinetic / unit gravitational coloumns) in S electron black holes in all layers of 'gravitational sphere' direct their force by directing all these vectors, towards 'gravitational center of body' to support the load of body in all planes and from all directions.

In unit black hole around its 'gravitational singularity' its total mass of S unit masses concentrates in total area of gravitational sphere itself. Similarly " universal singularity" singularity of universe at the time of its birth needs a change in its perception. Contrary to general belief all matter was not condensed at one point (in one Planck's least length) at the time of beginning of universe but it was occupying a substantial space around 'singularity of universe'. This concept even cancels the need of sudden exponential expansion of universe soon after its birth.

The 'gravitational center' of 'n unit masses cosmic body' is supported on n^2 gravitons by their n^2 ‘full kinetic / unit ‘gravitational coloumns’ which form this gravitational sphere. All these gravitons direct their vectors to support this ‘load’ at ‘gravitational center’ of body.

Outer most layer of ‘n layered gravitational sphere’ have 2n–1 gravitons which all unites by Linear combination’ of vectors to produce one ‘linear span’, to produce ‘gravitational (field) coloumn of body’. All rotating magnetic vortexes (full kinetic / unit gravitational coloumns), one on each bound treo (graviton) will unite to form gravitational (field) coloumn of body. (D.3.32 : Union of multiple full kinetic / unit gravitational coloumns)


Radio waves
Light waves
Gamma Waves
Electron Orbits
Neutron Orbits
Unit mass
10^6 Unit masses (1Kg mass)
10^{32} Unit masses (Earth)
10^{38} Unit masses (Sun)
10^{43} Unit masses (Ideal Black Hole)

One unit mass is supported at one graviton by one full kinetic /unit gravitational coloumn. Bigger bodies made up of ‘multiple unit masses’(as shown) exert a ‘load’ of square number of unit masses and are supported by square number of gravitons in gravitational sphere which directs their all vector towards gravitational center of cosmic body to support it.
2n-1 full kinetic / unit gravitational coloumns in each layer of gravitational (field) coloumn unites to support the 2MG load of Sun, by this one layer. These coloumns unites side by side and in second dimensional deformation, of gravitational field of Sun, they form orbit of all planets.

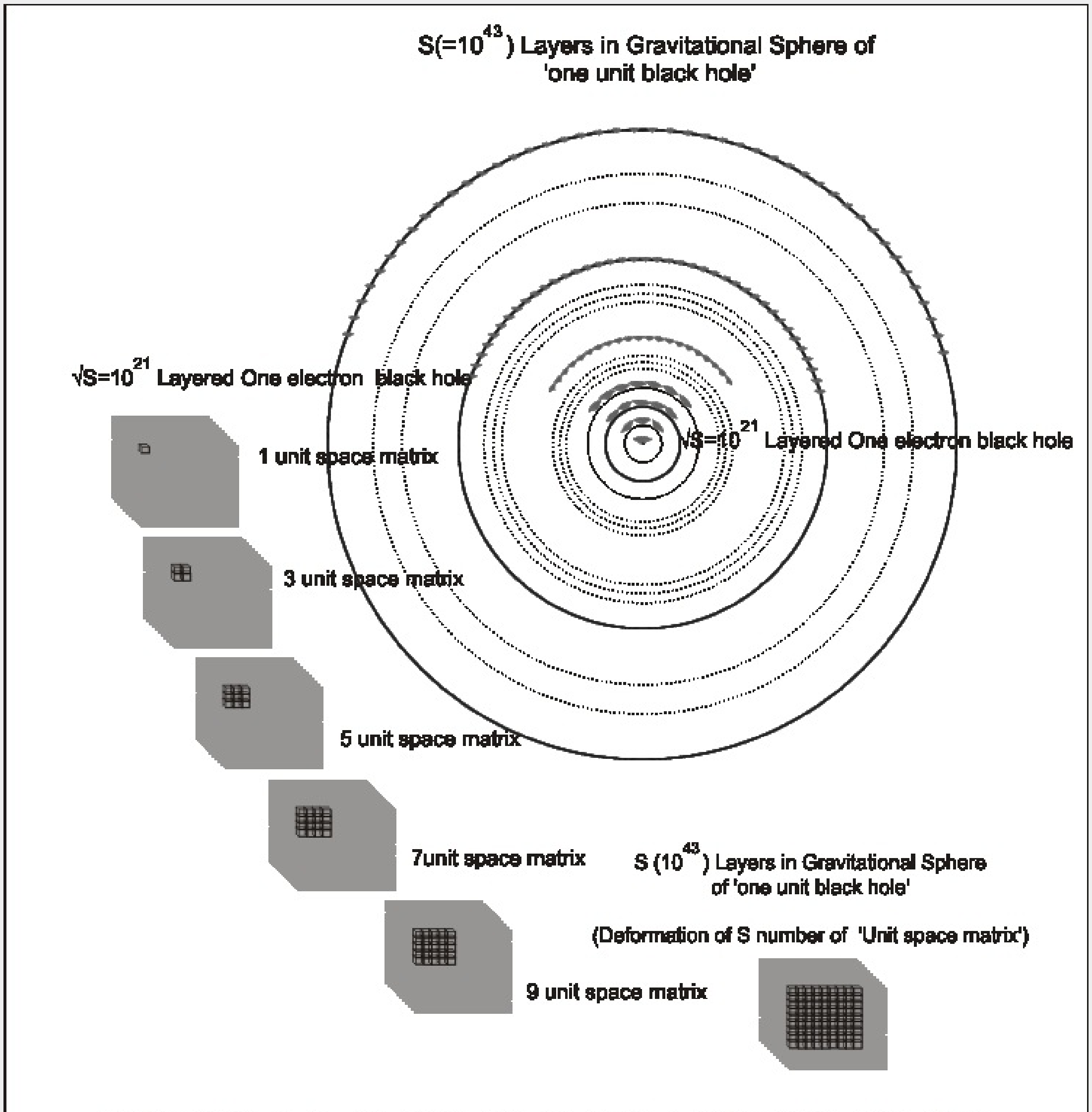
Diagram 3.32 : Union of Multiple full/kinetic Unit

Gravitational Coloumns to form gravitational (coloumn) field of body.

Each n^{th} layer of this ‘gravitational (field) coloumn of body’ have total ‘gravitational kinetic energy’ of 2MG in its total 2n–1 sub kinetic coloumns in wave length.

In successively increasing size of each concentric distal layer of gravitational field (coloumn) of body, the number of sub kinetic coloumns increases, but their height (layers) decreases, as we move away from body.

Thus the central ‘load’ at ‘gravitational center of body’ dilutes beyond periphery of gravitational sphere and deforms space-matrix to form gravitational fields of body which extend from third to second and then in first dimension.


S(=10^43) Layers in Gravitational Sphere of
'one unit black hole'
√S=10^21 Layered One electron black hole
√S=10^21 Layered One electron black hole
1 unit space matrix
3 unit space matrix
5 unit space matrix
7unit space matrix
9 unit space matrix
S (10^43) Layers in Gravitational Sphere
of 'one unit black hole'
(Deformation of S number of 'Unit space matrix')

Deformation in fourth dimension increasing deformation of multiple "unit space matrices" (as deformation of multiple books)

Diagram 3.33 : Gravitational Sphere

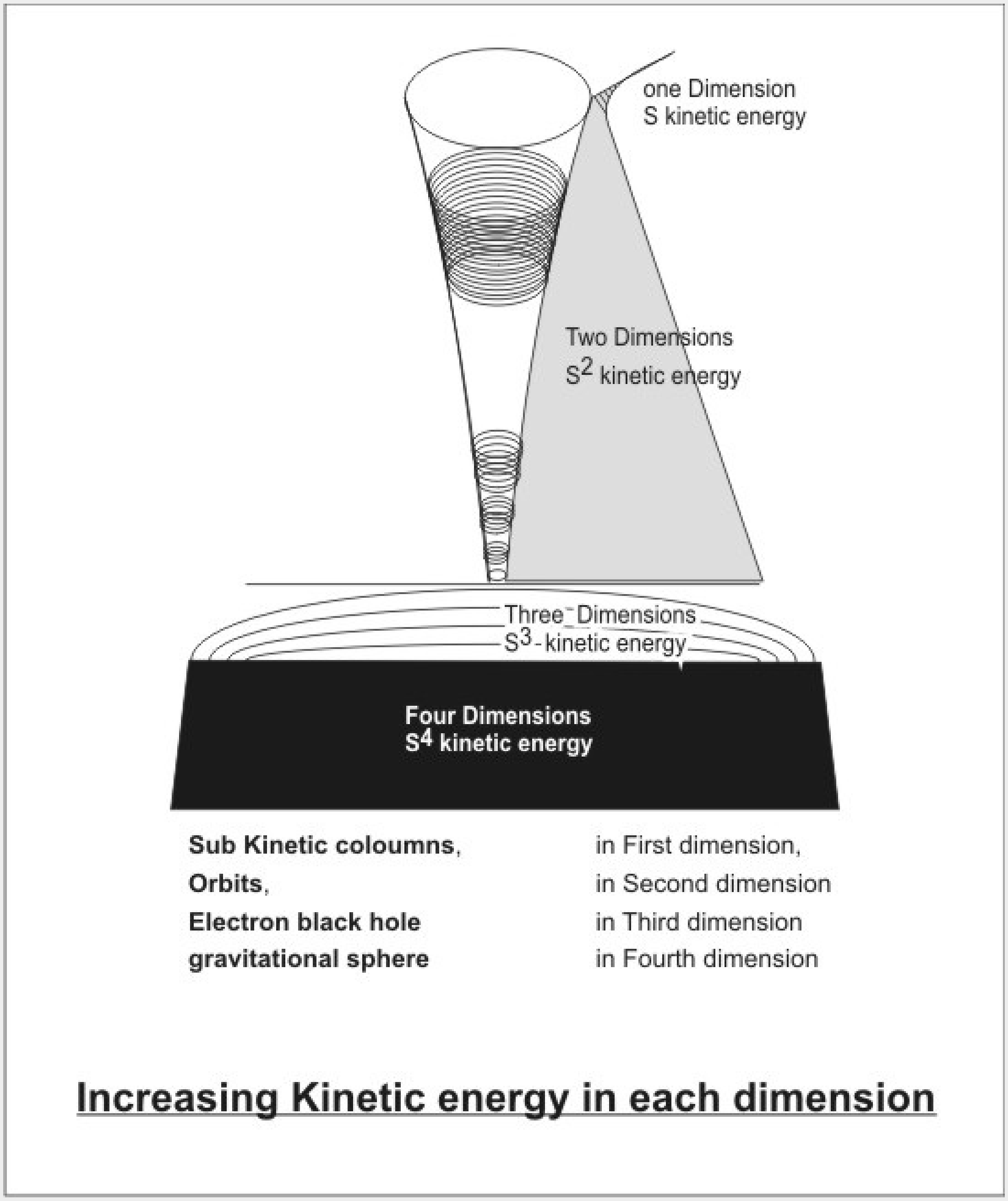
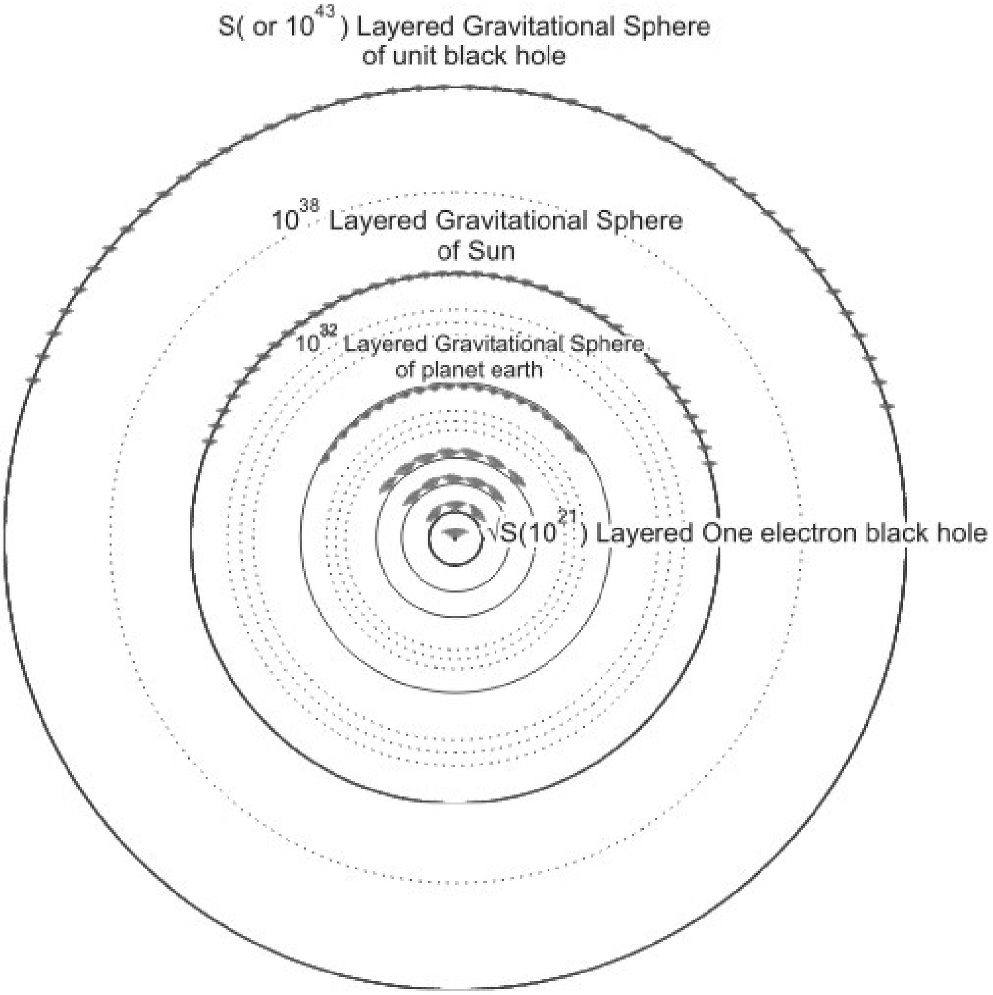

one Dimension
S kinetic energy
Two Dimensions
S2 kinetic energy
Three Dimensions
S3 - kinetic energy
Four Dimensions
S4 kinetic energy
Sub Kinetic coloumns, in First dimension,
Orbits, in Second dimension
Electron black hole in Third dimension
gravitational sphere in Fourth dimension
Increasing Kinetic energy in each dimension

Diagram 3.34 : Kinetic Energy in all Dimensions

All S^2 gravitons in one S layered gravitational sphere direct their S^4 total kinetic energy towards the gravitational center of gravitational sphere of ‘unit black hole’.

The ‘unit black hole’ can contract its total mass of ‘10^{43} unit masses’ (S^3 ‘free treos’) in the area of its S layered gravitational sphere; with its periphery rotating at the speed of light. As nothing can come out of black hole; even the photon can not escape from its enormous force of gravitational attraction, so black holes remain invisible and only identified by its great gravitational attraction towards other cosmic bodies.


S(or 10^{43}) Layered Gravitational Sphere of unit black hole
10^{38} Layered Gravitational Sphere of Sun
10^{32} Layered Gravitational Sphere of planet earth
$\sqrt{S}(10^{21})$ Layered One electron black hole

Number of bound treo Layers forming its gravitational sphere are always equal in number, to the unit masses in this cosmic body

Deformation in fourth dimension

Diagram 3.35 : Gravitational Sphere of Cosmic Bodies

In the deformation of four dimensions for cosmic body of Earth, a body of '10^{32} unit masses' (i.e. made up of 10^{118} free treos) deforms total $(10^{32})^2$ 'full kinetic / unit gravitational coloumns' in its gravitational sphere. The outer most layer of this 10^{32} layered gravitational sphere has $(2\times10^{32}-1)$ gravitons and same number of 'full kinetic / unit gravitational coloumns' which merge to form Earth's gravitational field.

Sun having '10^{38} unit masses' (i.e. made up of 10^{124} free treos) deforms total $(10^{38})^2$ 'full kinetic /unit gravitational coloumns' in its gravitational sphere of 10^{38} layers. While outer most layer, of this 10^{38} layered gravitational sphere have $(2 \times 10^{38} -1)$ gravitons and same number of 'full kinetic /unit gravitational coloumns' which unite to form one gravitational (field) coloumn of Sun.

One unit black hole of '10^{43} unit masses' (made up of 10^{129} free treos) deforms total $(10^{43})^2$ gravitons and same number of 'full kinetic / unit gravitational coloumns' in its gravitational sphere. Similarly $(2 \times 10^{43}-1)$ gravitons and 'full kinetic / unit gravitational coloumns' will merge at gravitational sphere (Schwarzschild's sphere) and will form 'gravitational (field) coloumn of unit black hole'. Kinetic energy of S^2 Gravitons i.e. $\{1.956 \times 10^9 \text{J} (1.855 \times 10^{43})^2 \}$ gravitons at the gravitational center of unit black hole = 6.730×10^{95} J.

With deformation of time along with increasing 'gravitational field strength' this field will resemble Schwarzschild matrix of 'general theory of relativity' and will simultaneously obey the Newton's gravitational field equations in this field. In the gravitational field of all these masses, beyond its Schwarzschild gravitational sphere, the subsequent outer layers at each next quantum level in 'gravitational (field) coloumn of body' rotates at successively reducing speed.

Increasing Surface Area of Gravitational Sphere

With increase of each unit mass in the big cosmic body there is increase in the size of gravitational sphere by one (bound treo) layer and its radius increases by one bound treo distance.

With increase of each unit mass in the big cosmic body there is increase in the size of gravitational sphere by one (bound treo) layer and its radius increases by one bound treo distance. The surface area increases in integral multiple with additional one layer of gravitational sphere.

The gravitational spheres are like 'hand grinders' of universe which churn matter to produce 'Hawkin's radiation'[1]. The formation of gravitational sphere starts from equatorial plane of body and extends towards poles, *thus the 'Hawkin's radiation' and 'electronic beams' emerge from two poles of an incomplete black hole* (rotating) before the deformation is completed, from all possible sides to form a spherical 'unit black hole'.

Our galaxy (milky way) which is made up of 10^{50} unit masses or 10^{42} kg, has about 10^7 unit black holes at its gravitational center, in its galactic nucleus.

The *spiral arms of galaxy* are formed in the response of 'diluted mass pressure' of many black holes (at galactic center) and each one is deformation in third dimension, by curve-angular 'gravitational coloumns of one unit black hole'. Each spiral arm emerges from one 'unit black hole' out of many 'unit black holes' present at gravitational center of galaxy. The empty undeformed space-matrix present in between spiral arms of a galaxy can serve as express high ways of our inter-galactic journeys.

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1. These gravitational spheres of all cosmic bodies act as ideal ‘hand grinders’ due to circular gravitational waves moving at different speeds in each layer, which churn all matter which falls in these baby black holes e.g. our star Sun (gravitational sphere is off 10^{38} layers in 3 km diameter). This out flow of treos from ergosphere of gravitational spheres act as the force which flow solar wind from Sun outwards or Electron beams from rotating cosmic bodies like black holes and neutron stars. By strong gravitational attraction of these bodies the matter is gathered and then churned. (by unwrapping of the kinetic coloumns wrapped on mass-energy of each particle, and it produces Hawkin’s energy pairs, of positive and negative energy i.e. treos and voids out of which negative energy as ‘voids’ will fall back in black hole, while positive energy as ‘treos’ are released from ‘ergo sphere’ of these bodies). Treos ‘as positive energy particles along with enormous gravitational kinetic energy of body’ around gravitational center of Earth, heats the core of planet earth, moves tectonic plates to produce earthquakes & volcanoes.

QUANTUM GRAVITATION

> "If you enter a blind lane, it is better to turn back and find a new path" - Ashok

This chapter will explain :

Gravitation and gravitational forces at quantum level

After one dimensional description of gravitational fields with the help of equations given by Newton, Einstein in his General theory of relativity, could clear that gravitation is four dimensional curvature of Space-Time produced by our star, Sun. Planets move straight but the path on which they travel is curved. From long time the scientists were of the opinion that the projected picture of gravitation is still incomplete.

So far the observed gravitational attraction which is actually one effect of phenomenon of gravitation has been considered as a complete phenomenon in itself, without exploring what produces this gravitational attraction and why? The general theory of relativity and this treo model of universe both consider Gravitation as a four dimensional deformation of Space-time.

In this universe purpose can be searched out behind every action. This treo model explains purpose of gravitation, and also describes how and why the space-time curves in increasing number of dimensions to support different increasing loads on space matrix in universe. By using all available pieces of jig saw puzzle of gravitation (and of all other forces) and then by arranging them in right frame, it completes the full picture of gravitation and unify all forces, as one force generated by action - reaction mechanism of space matrix in increasing number of dimensions.

Turtles all the way down

Mr. Stephen Hawkins in his book 'A Brief History of Time' has given the reference of a little old lady who after listening the lecture on gravitation asked the orator, "Sir you may be right on some points 'but it is a turtle which supports the Earth'. When the orator inquired 'but who supports this turtle supporting the Earth the lady said 'smart boy, to support this turtle, there are smaller turtles one below the other' (From 'A Brief History of Time', Dr Stephen Hawkins, 1988)."

I would like to point out to Dr. Hawkins the old lady was right; 'in fact there are turtles all the way down'; These are deformed bound treos, or energy particles which accumulate enormous kinetic energy, as they are converted into gravitons in the gravitational sphere (kinetic coloumn of fourth dimension), to support/ neutralize the load (of Sun or any cosmic body) which increases in square of quanta of its mass/ momentum, at its gravitational center (D.3.33) In turn this central load of cosmic body at its gravitational center is supported by its gravitational sphere.

The exerted mass pressure of central body at a distance is its diluted mass pressure (a) which at a distance (r) from sun exert a load 'ra'. This load at each apex bound treo in wave length is neutralized by equal number of kinetons v^2 (deformed bound treos) which form one sub kinetic coloumn of each individual concentric bigger layer in its gravitational field. The total kinetic energy in all sub kinetic coloumns in any one layer can support total 2MG load of body (D.4.3). This ‘diluting central mass pressure’ on each next bigger concentric layer in gravitational field, is supported by gradually reducing contraction of space-matrix in third, second and finally first dimension till it fades up to a minimum level of ‘one free treo’ to be supported by ‘one deformed bound treo’ or one ‘kineton‘ in the last layer of gravitational field of Sun. (the smallest turtle of the story).

Newton ‘described" universal gravitational constant’ as the force of attraction between ‘two bodies of 1 kg mass each, separated by a distance of 1 meter’. But he didn’t explain why and how this force of attraction is generated.

Einstein in his ‘General theory of relativity’ , a mathematical model’ has described gravitation as ‘curvature of space’ i.e. he admitted that this curvature of space is produced by the presence of a body (e.g. Sun). His calculations which described gravitational field, were later on depicted as Schwarzschild matrix; are in fact synonymous with second dimensional contraction of space-matrix at which the planets are placed. He stated that the Earth and other planets move straight, but it is the path which is curved due to the presence of Sun. The difference in ‘Slope of deformation’ produced by each body, results in fall of bodies towards each other, to which we notice as gravitational attraction.

Einstein while describing gravitation as contraction of space did not describe the mechanism and purpose of this contraction of space-time. Thus we find that both the above descriptions of the gravitation are incomplete.

As advocated, ‘Gravitational attraction’ is not a phenomenon in itself but it is only one effect of phenomenon of gravitation. No gravitation is produced without the presence of a body. The bodies are supported by the forces (kinetic energy in gravitational fields) generated due to the contraction of space-matrix and it is the gravitational phenomenon in proposed model.

When a body, comes with in gravitational field of another body, due to same shared space-matrix between them the deficient kinetic support is available to both bodies and two bodies fall towards each other (named as gravitational attraction).

The Gravitation can be described as a reaction by the space-matrix to neutralize the mass pressure of a body. Thus the space-matrix in response to ‘mass pressure of Sun’ generates a ‘kinetic energy pool’ in four dimensions around it (which genrates gravitational sphere and gravitational field of Sun) to neutralize its mass pressure and converts Sun into a weightless symbolic ‘point mass’ on space-matrix.

Gravitational support make all bodies to convert themselves as weight less ‘point masses’ on space matrix. It is for this reason that when Galileo, simultaneously dropped balls of different masses from ‘leaning tower of Pisa’ they reached the ground at the same time. The ‘different mass pressures’ of all these bodies neutralized by their individual gravitational fields and then converted as ‘weight less point masses’ on space matrix were affected and dragged equally by the (legend) gravitational field of Earth, and thus they all reached the ground at the same time.

Another example of this universal behavior of all bodies, to present them selves as ‘symbolic weight less point masses’ on space-matrix, is seen in motion of planets.

The ‘speed of revolution of all planets’ depends on their respective distances from Sun and not on their individual different masses. Their individual mass pressure is neutralized by their individual gravitational fields and now all these planets after being converted as ‘weight less point masses’ on space-matrix revolve in their orbits at the speed of ‘v’ bound treo distance per second, affected only by gravitational kinetic energy of Sun present in their orbits ($v^2 = Mg/r$).

Description of Newton’s Gravitational fields of Sun based on the Treo model

Description of gravitational fields given by Newton's gravitational field equations is in fact description of gravitation in first dimension while the gravitational fields are four dimensional deformation of space-matrix. Proposed coloumn geometry is in accordance with Newtons gravitational field equations.

The Newton’s Gravitational Fields are described by following relation;

$MG = r^2a = rv^2$, where

M: is the mass of Sun in kg

G: value of universal Gravitational constant. (while in the treo model it is recalculated as ‘number of Kinetons acting on one kg mass’)

r: distance of planet from Sun or ‘semi major axis of planet’ (calculated in the treo model in terms of the number of bound treo layers)

v^2: is gravitational kinetic energy at distance ‘r’ (in this treo model are total number of kinetons in one sub kinetic coloumn, at any point placed at distance ‘r’ from Sun, in ‘gravitational coloumn of sun’).

v: speed of planet in its orbit.

a: is Newton’s Acceleration or Einstein’s Slope of contraction (and according to the treo model this ‘a’ is ‘diluted mass pressure’ of Sun at any point present at a distance r. Mass pressure of Sun ‘MG’, divides equally on r^2 kinetons present in layers of kinetic coloumn up to distance ‘r’; and can be calculated by Newton’s formula; $a = MG / r^2$) (D.2.3).

According to above equations

As, $MG = r^2a$ and also $MG = rv^2$; Thus $ra = v^2$

This relation finds explanation in present treo model as below;

As ‘ra’ = v^2: where ‘a’ is the ‘Diluted mass pressure’ at distance ‘r’, which produces a load ‘ra’ on space-matrix, it is action (this ‘ra’ also indicates Einstein’s slope of contraction) and it is reacted by space-matrix by conversion of equal number of bound treos in to kinetons, which are arranged in v layered kinetic coloumns as ‘kinetic energy component’ i.e ‘v^2’ number of kinetons .

‘v^2’ : number of kinetons present in each ‘kinetic coloumn’ present on each apex bound treos in wave length, in this one layer of ‘gravitational (field) coloumn of Sun’ which produces ‘planetary orbit’ and propels ‘point mass of planet’ in this orbit by v bound treo distance per second.

‘v’ : height or number of bound treo layers in one coloumn = it is frequency of wave = the number of quanta mass energy in any packet or equal to the diluted mass pressure of parent body at this point = total number of orbitums in all shells in wave length of matter wave at this quantum level which support per quanta mass or neutralizes diluted mass pressure = the number of bound treos distance the ‘point mass’ of body (planet) will travels in one second in its orbit (formed in gravitational field of Sun) i.e. orbital speed of planet.

Use of Quantized value of Gravitational Constant explains the phenomenon of gravitation as action-reaction mechanism

To know the real nature of ‘universal constants’ we must go for more natural and universal units. Here the quantized value of gravitational constant is calculated by replacing meter with Planck least length.(Planck least length is in fact true unit of length in nature where as meter is assumed unit of length.)

In this study the value of other universal constants e.g. Speed of light, is denoted in terms of these natural units. Use of proposed quantized unit of gravitational constant is more scientific. The use of quantification of value of gravitational constant explains the phenomenon of gravitation ‘as reaction-action mechanism operated by space-matrix’. Similarly all universal constants when expressed in Planck’s units explains their true nature and universe more clearly.

Treos are miniscule units (of Planck’s least length) which constructs our universe. Free treos in different number form packets of all photons, elementary particles and Nucleons. Bound treos interwoven alternately with curled up voids construct omnipresent, uniform space matrix. The load of each free treo in a packet is supported by equal number of deformed bound treo (kinetons) arranged in geometric configuration of kinetic coloumns.

Quantized Value of Gravitational Constant is recalculated by replacing unit of length - from ‘meter’ (an assumed unit) to Planck’s least length (natural unit of length

Gravitational constant ‘G’ = 6.6742×10^{-11} Meter ^{3} per kg, per sec per sec. (Dimensional Formula $L^3M^{-1}T^{-2}$)

(1) ‘G’ can be expressed in terms of number of deformed bound treos

(kinetons) by expressing meter in terms of number of bound treos per meter[1]

$= 6.67384 \times 10^{-11} \times (0.61873569 \times 10^{35})^3$ per kg, per sec per sec

$= 1.5808523 \times 10^{94}$ kinetons (deformed bound treos) per kg, per second per second.

It also means that this much number of kinetons act on 1kg mass per second per second. As these bound treos (kinetons) will support equal number of ‘free treos’, then 1.5808523×10^{94} ‘free treos’ constitute one kg mass.

(2) Alternatively the value of G can also be denoted by number of kinetons acting on one unit mass (S^2 number of free treos) to support it.

One unit mass is Planck’s mass = $m_p = 2.17623 \times 10^{-8}$ *kg (about the mass of ‘an egg of flea’)* [2] which can be verified considering 1 Kg has 1.5808523×10^{94} free treos.

Planck’s mass = 2.177×10^{-8} *kg* = ($3.441937353 \times 10^{86}$ free treos / 1.5808523×10^{94} free treos in one kg)

As equal number of kinetons supports this unit mass at one graviton the proposed new value of Gravitational constant

$= 3.441937353 \times 10^{86}$ (or S^2) kinetons, per unit mass, per second per sec.

(3) Alternatively the value of G can also be denoted by kinetons acting on one free treo as in case of unit photon.

= 1 kineton (deformed bound treo) per free treo, per sec per second.

Then gravitation as a phenomenon can be explained as

G = universal constant = 1 unit action by one free treo = one deformed bound treo (one kineton) which reacts to this action per second per second.

This action impart weight to all bodies. Thus weight (mass in terms of free treos × value of G) of one free treo on space-matrix = one free treo (M) × 1 unit action (G).

Gravitation is phenomenon, generated by action of (each) one free treo and its reaction by one bound treo of space-matrix. This action-reaction mechanism produced on space-matrix, in which action of one free treo on one bound treo of space-matrix in a reaction converts it in to one kineton which supports this free treo continuously per vibration.

Graviton is a Carrier Boson Which Carries the Gravitational Force

From one quanta mass-energy packet of a unit photon to S quanta mass-energy packet of 'unit mass', all are supported on their reducing wavelengths from '2S –1 bound treos' to just 'one bound treo' in complete contraction of first and second dimension. The S quanta mass-energy of 'unit mass' is supported on one bound treo [on its decreased wavelength of just one bound treo according to formula (S bound treos /S number of quanta mass energy in packet= 1 bound treo wave length) at one 'unit gravitational center'.

S^2 free treos (S quanta mass) in one unit mass exerts its load at one bound treo which is 'unit gravitational center of one unit mass'. This load is supported by combined force of total S orbitums present in all matter waves in one full kinetic /unit gravitational coloumn which act at this 'unit gravitational center' (and is now termed as one graviton).

This also explains the Einstein famous equation $E=mc^2$. For a unit mass body where m is 1, its energy (e) is c^2 energy particles (Here c is the speed of light; which is calculated in the treo model as S bound treos distance per second) = S^2 free treos.

The Graviton is a dumb bell shaped structure (formed by apex bound treo and one unit gravitational center, and both change their place and role per vibration rotating at the speed of light, this shape provides it, spin two as it regains its shape by 180 degree turn i.e. by half rotation of up side down, like 'queen of playing card'). Graviton itself has no mass (energy) but infinite range of action.

Unit mass is limit of maximum load, which can be perceived by space-matrix at one bound treo i.e. one graviton.

Multiple unit masses in body, and its load in square of unit masses are supported at equal number of gravitons, by their full kinetic / unit gravitational coloumns.

Such S gravitons are present in √S layers in a kinetic coloumn which form 'one electron black hole' in complete contraction of third dimension for one '√S unit masses body' .

In complete contraction of fourth dimension S^2 'gravitons' (in S number of electron black holes) in one S layered biggest gravitational sphere, exert their combined force at gravitational center to support S^2 unit mass load of one 'S unit mass body' of a 'unit black hole'.

Any smaller cosmic body of n unit masses (e.g. Sun is of 10^{38} unit masses) exerts $(n)^2$ unit masses load at gravitational center of body which is supported by total $(n)^2$ gravitons in kinetic coloumn of fourth dimension (gravitational sphere) in n layers of gravitational sphere. It dilutes as 2n–1 unit masses load on n^{th} layer at the periphery of gravitational sphere and is supported by 2n–1 gravitons.

This ‘graviton’ is a ‘minuscule black hole’ whose Schwarzschild radius is one Planck’s least length and the matter wave rotates at the speed of light around this one unit mass or one Planck mass.

(Following description is from Wikipedia --To make a black hole, one must concentrate mass or energy sufficiently that the escape velocity from the region in which it is concentrated exceeds the speed of light. This condition gives the Schwarzschild radius, $R=2GM/c^2$*, where G is the gravitational constant, c is the speed of light, and M the mass of the black hole. On the other hand, the Compton wavelength,(lambda =h/Mc), where h is Planck’s constant, represents a limit on the minimum size of the region in which a mass M at rest can be localized. For sufficiently small M, the reduced Compton wavelength {lambda =* $\hbar/Mc$*}, where* $\hbar$ *is Reduced Planck constant) exceeds half the Schwarzschild radius, and no black hole description exists*. This smallest mass for a black hole is thus approximately the Planck mass.)

Unit Gravitational center or one Graviton is the joining point of ‘quantum physics’ with ‘general theory of relativity’ and key point in construction of this ‘model of quantum gravitation’.

Some important relationships which describe Graviton

Planck’s mass = $mp = \sqrt{(\hbar c/G)} = 2.17651 \times 10^{-8}$ *kg (Conventional value)*

in this model it is = ‘One unit mass’ or S quanta mass-energy or S^2 free treos

Planck’s energy $Ep = \sqrt{(\hbar c^5/G)} = 1.956 \times 10^9$ *J (Conventional value)*

In this model Mass-energy of one unit mass = Energy supported and neutralized at one Graviton = Planck’s mass × $c^2 = 2.177 \times 10^{-8}$ kg × $(2.99 \times 10^{8}\ \text{meter})^2 = 1.956 \times 10^9$ *J*

Planck's force Ep/lp = 1.21027 × 10^{44} newton (Conventional value)

In this model this is tensile strength of space-matrix = Planck's energy in one meter = maximum tensile strength of space-matrix calculated per meter= Energy supporting one unit mass calculated in J × number of bound treos in one meter = 1.956 × 10^{9} J × 0.61889296 × 10^{35} bound treos in one meter (meter is replaced by number of bound treos) = 1.21027 × 10^{44} newton

Planck's energy density =Up= Ep / lp^3 = $c^7/\hbar G^2$ = 4.636 × 10^{113} J/m^3 (Conventional value)

in this model Planck's energy density= Planck's energy in meter cube (Planck's energy multiplied by bound treos in one meter cube) = Planck's energy *1.956 × 10^{9}J* multiplied by meter cube (0.61889296 × $10^3)^3$ = 4.636 × 10^{113} J/m^3

'Diluted Mass Pressure' of a body exerted at any point in its gravitational field is 'a' (in this treo model) which produces Newton's 'acceleration' (calculated as 'a' = MG/r^2) or Einstein's 'slope of contraction'

All three models describe the same phenomenon of gravitation.

The space-matrix behaves like a stretched sheet of cloth. Along with a central depression produced at the gravitational center of body, the space-matrix sags up to periphery of gravitational field of body due to ‘diluted mass pressure’ exerted through out gravitational field by total mass-energy of body.

In the treo model ‘a’ is the diluted mass pressure of body; at a distance ‘r’ it generates an action ‘ra’, which is the ‘load on one bound treo’ any where in acceleration zone, of its gravitational field.

This is reacted (supported) by equal number of kinetons (v^2) present in one v layered kinetic coloumn formed at this point and produces ‘equal & opposite reaction’ to neutralize this ‘diluted mass pressure of body’.

In our solar gravitational field at the distance ‘r’ from sun, v^2 describes the ‘gravitational field (kinetic energy) strength’ while ‘v’ is the ‘speed of revolution of point mass of planet’ in its orbit.

The planetary orbits which are nearer to Sun, in the fields with higher value of ‘gravitational field (kinetic energy) strength’, or with ‘greater slope of deformation’ revolute faster.

Mass pressure of all cosmic bodies (supported by four dimensional contraction by their respective gravitational spheres), dilutes in their respective gravitational field. It fades gradually and first produces three dimensional contraction, then two dimensional contraction and finally one dimensional contraction with no left over sagging of space-matrix and one free treo diluted mass-energy which is supported by one bound treo of space matrix.

Mass pressure of Sun (load) at its

Gravitational Center

Mass-energy of Sun : Mass of Sun (M) = 1.988435 × 10^{30} Kg = 0.91379754 × 10^{38} unit masses

quantized Value of gravitational constant G = 1.581763491 × 10^{94} kinetons per kg per second per second

MG = 1.988435 × 10^{30} kg × 1.581763491 × 10^{94} kinetons per kg per second per second = 3.145233887 × 10^{124} kinetons per second per second.

They support equal number of 3.145233887 × 10^{124} free treos.

Number of Unit Masses in Sun : 3.145233887 × 10^{124} free treos mass energy in Sun / 3.441937353 × 10^{86} free treos in one unit mass (S^2 free treos) = 0.91379754 × 10^{38} unit masses in Sun.

The $(0.913 \times 10^{38})^2$ Gravitons are in one rotating kinetic coloumn of fourth dimension of 0.913 × 10^{38} layers (2n–1 gravitons in its n th layer), which supports $(0.913 \times 10^{38})^2$ unit masses load of Sun, a body made up of 0.913 × 10^{38} unit masses, at its gravitational center.

The extension of this gravitational coloumn beyond gravitational sphere which form gravitational field and its each layer also supports 2MG or 2 × 0.913 × 10^{38} –1 (2 n–1 unit masses load) by equal kinetic energy present in all sub kinetic coloumns in wave length of matter wave in any one layer.

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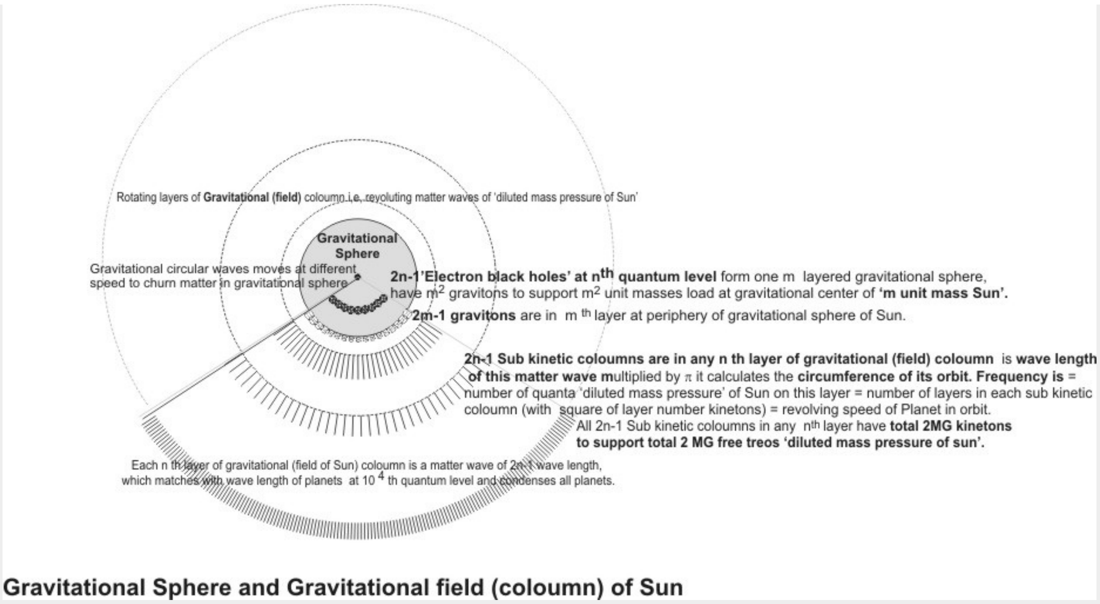

Rotating layers of Gravitational (field) coloumn i.e. revoluting matter waves of 'diluted mass pressure of Sun'
Gravitational Sphere
Gravitational circular waves moves at different speed to churn matter in gravitational sphere
2n-1'Electron black holes' at nth quantum level form one m layered gravitational sphere, have m2 gravitons to support m2 unit masses load at gravitational center of 'm unit mass Sun'.
2m-1 gravitons are in m th layer at periphery of gravitational sphere of Sun.
2n-1 Sub kinetic coloumns are in any n th layer of gravitational (field) coloumn is wave length of this matter wave multiplied by π it calculates the circumference of its orbit. Frequency is = number of quanta 'diluted mass pressure' of Sun on this layer = number of layers in each sub kinetic coloumn (with square of layer number kinetons) = revolving speed of Planet in orbit.
All 2n-1 Sub kinetic coloumns in any nth layer have total 2MG kinetons to support total 2 MG free treos 'diluted mass pressure of sun'.
Each n th layer of gravitational (field of Sun) coloumn is a matter wave of 2n-1 wave length, which matches with wave length of planets at 10 4 th quantum level and condenses all planets.
Gravitational Sphere and Gravitational field (coloumn) of Sun

Diagram 4.1 : Acceleration Zone or extent of one dimensional contraction produced by Sun.

Acceleration Zone is the extent of gravitational field of body, or extent of depression in stretched sheath of Space-matrix

According to Newton, what we know about gravitation is that bodies while falling in gravitational field of parent body (sun) accelerates and 'a' equates to this acceleration.

Einstein gave us the picture that it is the 'slope of space-time deformation' in which the bodies fall towards each other according to their different slope of deformation.

In the treo model the ‘mass pressure n^2 of n unit mass body is supported at its gravitational center . This spreads as diluted mass pressure (as 2n–1 on each layer) in acceleration zone (gravitational field) of body.

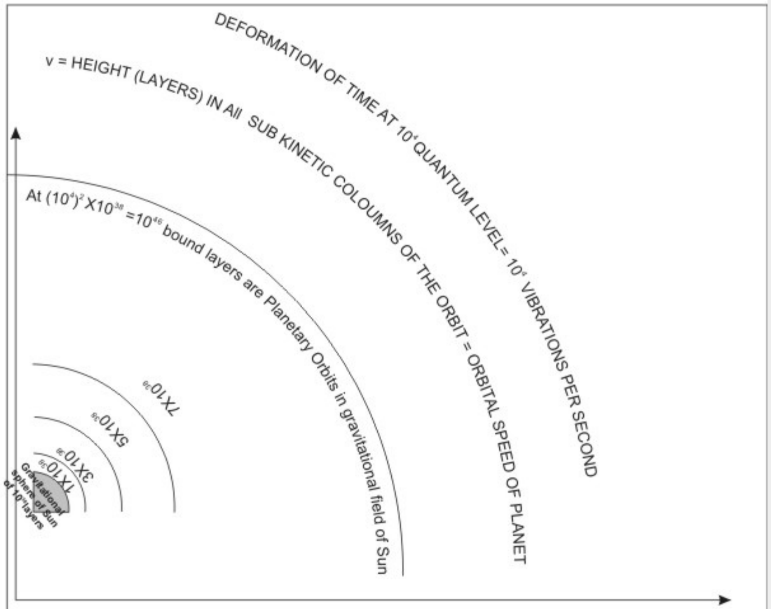
At any nth layer in gravitational coloumn of Sun, on its 2n–1 apex bound treos (in 2n–1 kinetic coloumns), its total kinetic energy $(2n-1) \times v^2$ is always equal to 2MG of Sun and thus each concentric consecutive layer (at next quantum level) in gravitational coloumn of Sun supports the ‘total mass pressure 23×10^3 of Sun’.

Layers in gravitational (field) coloumn of Sun

Mass pressure of Sun $3.145233887 \times 10^{124}$ free treos is supported by equal number ‘r^2’ kinetons in ‘r’ number of layers in one gravitational coloumn of Sun (D.4.1)

If ‘r’ is $1.773480726 \times 10^{62}$ layers then ‘r^2’ is equal to $(1.773480726 \times 10^{62})^2 = 3.145233887 \times 10^{124}$ bound treos present in ‘acceleration zone of gravitational coloumn of Sun’. [3]

If it is considered in one last layer of acceleration zone of Sun then this ‘diluted mass pressure of Sun’ ‘a’ is one free treo. This ‘diluted mass pressure of Sun’ of one free treo on each bound treo in this last layer is supported by one kineton.


DEFORMATION OF TIME AT 10^4 QUANTUM LEVEL= 10^4 VIBRATIONS PER SECOND
v = HEIGHT (LAYERS) IN All SUB KINETIC COLOUMNS OF THE ORBIT = ORBITAL SPEED OF PLANET
At $(10^4)^2 X10^{38} = 10^{46}$ bound layers are Planetary Orbits in gravitational field of Sun
$7X10^{38}$
$5X10^{38}$
$3X10^{38}$
$1X10^{38}$
Gravitational sphere of Sun of 10^{38} layers

10^{38} x 1+3 = 4 layers or 2^2 up to 2 nd quantum level, 10^{38} x 1+3+5 = 9 layers or 3^2 up to third quantum level or n^2 (square of quantum level) x 10^{38} layered gravitational sphere of Sun = total number of layer up to any n th quantum level.

Diagram 4.2 : Formula to Calculate Layers up to Any Quantum Level in Solar Gravitational Field.

Formation of Gravitational Coloumn (Gravitational Field)

How very small is related to very large? *Large is 'linear combination of many very small' and 'Linear combination' of vectors produces a 'linear span'.*

The vectors of all, n^2 gravitons in one n layered kinetic coloumn which form n layered 'gravitational sphere' support the gravitational center of n unit masses (any smaller cosmic body) and the outermost layer at its periphery has 2n–1 gravitons and 2n–1 full kinetic unit gravitational coloumns, which merge together and extend to form 'gravitational (field) coloumn of body'.

The matter waves of all 'full kinetic/unit gravitational coloumns' jointly form individual layers of gravitational coloumn

With the example of Sun a 10^{38} unit mass body having 10^{38} layers in its gravitational sphere, first quantum level outside this gravitational sphere has 1x 10^{38} bound treo layers,at second quentum level 3x 10^{38} bound treo layers are added in radius, third quantum level 5×10^{38} more layers of bound treos are added in radius, for fourth quantum level 7x 10^{38} more bound treo layers in radius or 2n–1x 10^{38} bound treo layers are added at n th quantum level in radius . If we calculate total number of bound treo layers (the distance from gravitational center of Sun) upto any n th quantum level it will be total n^2 x 10^{38}bound treo layers.

The RC wave length of matter wave at this n th quantum level will be n^2 x 10^{38} and the wave will form on 2 (n^2 x 10^{38}) –1 bound treos of this n^2 x 10^{38} th layer of gravitational kinetic coloumn, and multiplied by pi it will calculate the circumference of orbit

Any wave in n^{th} layer of this 'gravitational (field) coloumn of body' has total 2MG kinetic energy. In All 'sub kinetic coloumns' placed on 2n–1 apex bound treos of this layer of gravitational coloumn, and support total 2 MG load of Sun by this one wave in this//n th// layer. Or in other words the total mass energy of body (MG) is supported by each successive bigger layer in acceleration zone[3] with gradually decreasing kinetic energy on each sub kinetic coloumn in next layer.

The gravitational field fades with distance, the mass pressure of body at gravitational center (i.e. load) dilutes first inside gravitational sphere and then outside gravitational sphere and deforms space-matrix first in three dimensional contraction. Still far off the local space-matrix reacts to reduced load, and forms the whirlpool like contraction of space-matrix in two dimensional contraction, in which the planetary orbits are formed. Finally the gravitational field will fade out to one dimensional contraction of space-matrix up to last layer of ‘acceleration zone of body’.

vice-versa, as we approach the parent body from periphery of gravitational field, the ‘gravitational kinetic energy field strength’ and contraction of deformed space increases in successive (smaller) layers. With increasing ‘gravitational kinetic energy field strength’ it will also ‘slow down time’ by reducing vibration of each deformed bound treo present in these layers @ one vibration per second at each next quantum level.

It can be compared with kinetic energy *aura* around a body (produced in a reaction of diluted mass pressure of body on space-matrix) which concentrates (*increasing illumination*) towards gravitational center of body and equals to load $(\text{mass})^2$ of body at its gravitational center to support it.

Thus the mass of body is supported by concentric bigger layers of gravitational coloumn in ‘acceleration zone of body’ and after this zone there is no contraction of space-matrix.

After neutralization of its mass pressure, the body act as weight less ‘point mass’ on space-matrix and moves around parent body according to legend gravitational fields of parent body.[4]

Now, it is point of debate, that in the treo model describing ‘Pendulum quantum universe’, the positive gravitational kinetic energy generated by contraction of space-matrix is balanced by negative energy which produces expansion of universe (i.e. one sort of ‘cosmological constant’) due to uncurling of all voids and prevents the universe from further contraction and collapse.

The treo model dictates that ‘maximum gravitational kinetic energy of S^2 kinetons’ in gravitational field at any one deformed bound treo (on one graviton) is balanced by ‘cosmological constant of $1/S^2$ at each point’ (rate of uncurling of each void per vibration which produces expansion and increases total potential energy of universe) to cancel each other at each point, and it will result in, net total energy of universe as zero.

(This observation is contrary to the present belief that the negative gravitational energy is balanced by the total mass of universe, to keep the value of omega at 1).

2MG kinetons in all shells in wave length of any wave in one layer supports 2MG mass pressure of Sun at any n^{th} quantum level

(2n–1) total number of shells in any n^{th} layer of gravitational (field) coloumn of Sun × kinetic energy in one shell of this layer = 2 MG kinetic energy; which neutralizes total mass pressure of Sun exerted on this layer

At the periphery of Schwarzschild sphere of Sun on each of $2 \times 0.913 \times 10^{38}$ gravitons there is one ‘Full kinetic / unit gravitational coloumn’ of 3.441×10^{86} kinetons and 1.85×10^{43} orbitums. .

$2 \times 0.913 \times 10^{38} \times 3.441 \times 10^{86} = 2 \times 3.145 \times 10^{124}$ ‘kinetons’ = 2 MG load of Sun supported on this layer.

10^{43} bound treo layered (v) full kinetic /unit gravitational coloumns each having 3.441 z× 10^{86} kinetons (v^2 kinetons) are in 10^{38}th layer, at first gravitational quantum level at the periphery of gravitational sphere.

Similarly in gravitational coloumn (field) of Sun at each concentric bigger nth layer there are 2n–1 shells which support total 2MG load of Sun on this layer.

10^{42} bound treo layered (or v layered) shells are present in 10^{40}th layer, at 10^{th} quantum level. (v is also orbital speed of planet in this layer)

10^{41} bound treo layered (v), shells are present in 10^{42}nd layer, at 10^2 (100^{th}) quantum level.

10^{40} bound treo layered (v), shells are present in 10^{44}th layer, at 10^3 ($1{,}000^{th}$) quantum level.

At 10^4 th gravitational quantum level in gravitational (field) coloumn of Sun or at the Level of Planetary Orbits

10^{39} bound treo layered (v) shells in wave length are present in 10^{46}th layer, at 10^4 ($10{,}000^{th}$) quantum level. (And v or 10^{39} bound treo distance is the range of orbital speed of planets)

$(2 \times 10^{46} - 1) \times (10^{39})^2 = 10^{124}$ kinetons = 2MG of Sun

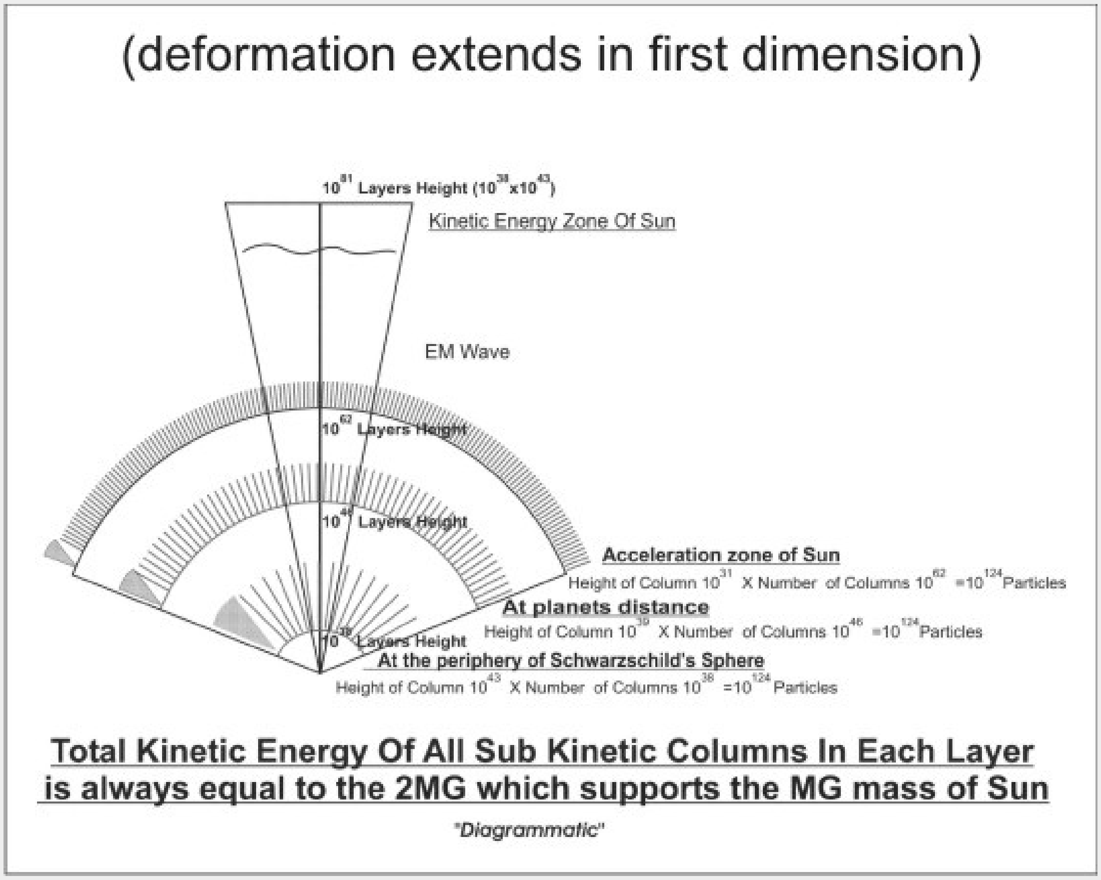

(deformation extends in first dimension)
10^{81} Layers Height (10^{38}x10^{43})
Kinetic Energy Zone Of Sun
EM Wave
10^{62} Layers Height
10^{46} Layers Height
Acceleration zone of Sun
Height of Column 10^{31} X Number of Columns 10^{62} =10^{124} Particles
At planets distance
Height of Column 10^{39} X Number of Columns 10^{46} =10^{124} Particles
10^{38} Layers Height
At the periphery of Schwarzschild's Sphere
Height of Column 10^{43} X Number of Columns 10^{38} =10^{124} Particles
Total Kinetic Energy Of All Sub Kinetic Columns In Each Layer is always equal to the 2MG which supports the MG mass of Sun
"Diagrammatic"

Diagram 4.3 : Kinetons in all Shells (rotating sub kinetic coloumns) in any one layer of Gravitational coloumn jointly support the total Mass Pressure of Sun

The distance in bound treo layers upto any quantum level in any gravitational field can be determined as square of quantum level number × number of bound treo layers in gravitational sphere of cosmic body.

e.g. in case of Sun the 10^4 th quantum level is at $10^{38} \times (10^4)^2$ or 10^{46}

layers in gravitational coloumn of Sun,.at which planets are placed.

Orbit of Earth is at distance (r) from center of Sun = $0.9258638622 \times 10^{46}$ bound treo layers.

Diluted mass pressure of Sun 'a' (MG/r^2) in this layer is $3.145233887 \times 10^{124} / (0.9258638622 \times 10^{46})^2 = 3.66911 \times 10^{32}$ free treos This diluted mass pressure of Sun ('a' in treo model) at the level of planet Earth, *is exactly equal to the conventional value of acceleration of Earth of 0.5929900813 cm per sec per sec.*

(Similarly the exact 'diluted mass pressure of Sun' 'a' at the level of all other planets is calculated and shown in Table 5).

While 'ra' (load) at this orbit = $3.67 \times 10^{32} \times 0.925 \times 10^{46} = 3.399 \times 10^{78}$ free treos.

But ra = v^2 (Action reaction mechanism)

Thus $v^2 = 3.3999573 \times 10^{78}$ (v^2) kinetons as 'gravitational kinetic energy' are present in each shell in orbit of Earth.

At the level of orbit of Earth, there are (2n–1)i.e, ($2 \times 0.925 \times 10^{46} - 1$) shells and each shell is made up of 3.399×10^{78} kinetons.

($2 \times 0.925 \times 10^{46} - 1$) number of shell × 3.399×10^{78} kinetons in each shell = $2 \times 3.145 \times 10^{124}$ kinetons = total 2 MG mass pressure of Sun.

Circumference of the Orbit Of Planet Earth

Each shell of this layer (in orbit of earth in gravitational coloumn of Sun) at the distance of planet Earth is made up of $1.843190775 \times 10^{39}$ layers (v) = frequency of wave = number of rotations per second of point mass = number of bound treo distance the point mass of planet Earth moves in its orbit in one second i.e. orbital speed of planet Earth.

These shells in orbit of Earth with 3.3999573×10^{78} kinetons (v^2) push the 'point mass' of Earth by 'v' bound treo distance per second = $1.843190775 \times 10^{39}$ 'bound treo distance per second' = 29.78444493 km per second which is the known revolution speed of earth.

CIRCUMFERENCE OF PLANET EARTH

(Equation 1) Conventional method of calculating the circumference of orbit of planet Earth

The distance traveled by Earth in one year in its orbit = circumference of orbit of planet Earth

This distance traveled by planet Earth 5.8026×10^{46} bound treo is motion of its point mass at the speed of $1.843190775 \times 10^{39}$ bound treo distance per second (≈ 30km per sec) in 31,536,000 seconds (one year), as one revolution in its orbit.

Or $1.84389778 \times 10^{39}$ bound treo distance per second is orbital speed of Earth when multiplied by 31557600 seconds in one year it is equal to 5.8188989×10^{46} bound treo distance.

(Equation 2) Center of Sun lies in orbital plain

The circumference ($2 \pi r$) of near circular (elliptical) orbit of planet Earth;

As Earth is at 0.925×10^{46} bound treo distance from sun, it is radius of its orbit 'r' , when multiplied by 2π it determines the circumference of orbit of Earth and is equal to 5.819×10^{46} bound treos. ($5.819 \times 10^{46} = 0.925 \times 10^{46} \times 6.283$ (value of 2π)

(Equation 3) 2 r forms 2 × reduced Compton wavelength of matter wave of earth

(It is arc of circle of 2 r or one layer of full kinetic/ unit gravitational coloumn, which forms one wave and at any instance it bears the total Solar mass pressure of 2MG, by total kinetic energy in all sub kinetic coloumns in wave length)

The wave revolving Earth in its orbit is one layer of rotating gravitational coloumn of Sun have $2 \times 0.9258638622 \times 10^{46} - 1$ bound treos (as 2n–1 in n^{th} layer or 2r in r layered coloumn).

In 10^{46}th layer of gravitational coloumn of Sun (at radius 'r') the wave moves (in a near circular orbit having circumference 2 'r' × π) to form the orbit of Planet in its angular frequency. Earth orbit is made up of [$2 \times (0.925 \times 10^{46}$ bound treos–1) × 3.141 (π) = $5.817 x\ 10^{46}$ bound treos]

(Equation 4) Orbit of earth is made by union of such 10^{38} wavelengths of matter waves, which moves at 10^{18} quantum level in one full/ unit gravitational coloumn.

(1) At 0.4281165×10^{18} th QUANTUM LEVEL OF SECOND DIMENSION

1.843×10^{39} layers are in each shell = frequency of wave

= (0.428×10^{18} th quantum level of second dimension × 4.307×10^{21} or $\sqrt{S}$ bound treo layers which increases at each next quantum level of second dimension)

This mass-energy of 1.843×10^{39} quanta (3.420×10^{82} free treos) gets equally distributed on 1.0065985×10^4 apex bound treos in wavelength, and exerts equal load of 3.399×10^{78} free treos on each apex bound treo in wave length , which get supported by equal number of 3.399×10^{78} kinetons in 1.843×10^{39} .layered,,each shell.

[It is to be noted here that all matter waves of second dimension at each quantum level of full kinetic unit gravitational coloumn consumes S^2 kinetic energy of second dimension e.g. Mass energy × wave length= S^2 = ($3.420 \times {}^{82}$ free treos mass energy) × 1.0065985×10^4 wave length]

(2) IN THE ORBIT OF EARTH

The same kinetic energy of 0.428×10^{18} th quantum level of second dimension is in orbit of Earth , which have same 1.843×10^{39} bound treo layered each shell and 3.399×10^{78} kinetons. In 0.913×10^{38} number of full kinetic / unit gravitational coloumns 0.913×10^{38} such matter waves of $(1.0065985 \times 10^4)^2$ wave length at 1.0065985×10^4 quantum level in gravitational coloumn of Sun, join to form $0.925\text{x}10^{46}$ bound treos reduced Compton wave length of orbit of Earth.

[0.9258×10^{46} distance of Earth from sun or radius = reduced Compton wave length = square of quantum level $(1.0065985 \times 10^4)^2$ or (1.01324067×10^8) × 0.913×10^{38} number of bound treo layers in gravitational sphere of Sun]

This reduced Compton wave length when multiplied by 2 π determines the circumference of orbit of Earth or its Compton wave length.

[0.913×10^{38} coloumns of sun × $(1.006598565 \times 10^4)^2$ bound treo wavelength in orbit of Earth × 6.283 (or 2 π) = 5.8173×10^{46} bound treo wavelength which is the circumference of Earth.]

Equations (1), (2), (3) and (4) all equates to the same circumference of orbit of Earth by three independent sources thus unites quantum mechanics with general theory of relativity and proves proposed treo model.

How General Theory Of Gravity Describes Same Picture Of Contraction Of Space Matrix

The magnitude of contraction of space-matrix in gravitational field due to the load of diluted mass pressure of body that is ‘ra’, this is ‘slope of contraction’ which when expressed in four dimensions of space –time represents Schwarzschild’s matrix of “general theory of relativity”

The Gravitational sphere of Sun is of 3 km diameter (i.e. of 2×10^{38} layers) as calculated in the treo model and same is its value according to general theory of gravity.

Gravitational kinetic energy and gravitational forces are generated by four dimensional contraction of space-matrix in a reaction to the load of a body.

The carrier boson of gravitational force is graviton with spin 2, which is ‘unit gravitational center’ of ‘unit mass’ or one bound treo which supports this unit mass by one ‘full kinetic/unit gravitational coloumn’ while the load of multiple unit masses in a body are balanced by multiple gravitons in third and fourth dimension.

As the natural upper limit of load which one bound treo can support by converting in a graviton is S^2 free treos load, thus it should decide the proposed value of universal gravitational constant as ‘S^2 kinetons per unit mass per second per second'.

Gravitational Attraction

When a body comes in gravitational field of another body, they share common space-matrix in between and it results in limited supporting gravitons available to both bodies. Shared gravitons shift their loyalty like other bosons (as all forces are produce by exchange of bosons), from one body to other to produce exchange force of gravitation. [5]

Due to this decreased gravitational support to both bodies (in the region of common shared space-matrix between them) they fall towards each other; seen as conventional gravitational attraction.

The gravitons of one body are utilized (robbed) by other body, which comes in 'acceleration zone' of this body and vice-versa. But due to this robbing of the gravitons of each other, the 'kinetic energy component' of both the bodies become deficient and both bodies with lesser support, in between, fall towards a common gravitational center, on shared common space-matrix and this is the attraction between two bodies.

Conventionally gravitational attraction is visualized as exchange of forces by carrier bosons; the gravitons. When two bodies are in gravitational field of each other we can convert this problem as 'one body problem'. Body 'A' with 4 unit mass, in its field have a body 'B' which is of 1 unit mass. The reduced mass is 4 – 1 = 3 for body B and 4 – 3 = 1 for body A. So 3 units gravitons of body A will be transferred to body B and 1 unit graviton of body B will be transferred to body A and thus both bodies will pull each other towards their common gravitational center by the force of these exchanged gravitons.

QUANTUM GRAVITATION AND UNIFICATION OF FORCES

We know that to produce EM force, photons are required while presence of elementary particles and atoms is a must to produce atomic forces. To produce gravitational forces at least a body should be there.

This means that presence of these masses initiates reaction in space matrix to form supporting kinetic coloumns.

Action Reaction Mechanism of Space-matrix Generates all Forces

Each bound treo of space-matrix is supported (in one plane), by one vibration of adjoining bound treo (which occur after Planck's least time), and thus all bound treos in all planes are supported by the adjoining bound treos present all around it. So each bound treo of space-matrix, gets dependent (or bound) with adjoining bound treos, along with a 'void' in between (which separates all bound treos and provide its individuality), and this is how the space-matrix is constructed.

Each one free treo (not bounded) exerts its load continuously (action) on its supporting 'one bound treo of space-matrix' and in turn is supported by one vibration of this supporting bound treo which occurs after a time gap of 'least time'(and are supported continuously by continuous vibrations of this bound treo S times per second), or if it is rotating or moving then it is supported by total S vibrations of S bound treos in one second. This means all S vibrations per second at one bound treo Or S bound treos from different S plains per second are required to continuously support this load of one free treo (e.g. each bound treo of rotating orbitum).

Presence of single free treo or accumulation of many free treos, at one apex bound treo (apex bound treos bear load along wave length in first and second dimension while in third and fourth dimension load is supported at gravitational center) initiates an action, to which space-matrix reacts by conversion of equal number of bound treos (by their conversion) in to kinetons; which get arranged in kinetic coloumns in increasing number of dimensions.

Each one quanta mass-energy' (S or 1.855×10^{43} number of free treos) is supported by formation of one 'EM wave' in photon packets in first dimension and in elementary particles by one 'rotation of one orbitum per second' in second dimensional contraction.

The mass-energy increases by one quantum at all $\sqrt{S}$ quantum levels to form all type of photon packets in first dimension (maximum $\sqrt{S}$ quantum levels in each of four dimensions), the number of EM waves per second increases from one wave in one second by unit photon, to $\sqrt{S}$ waves per second in gamma Photon in first dimensional contraction.

The deformation of first dimension occurs in response to load exerted on each apex bound treo in wave length. With each increase of one quanta mass-energy in photon packet at each next quantum level, its length of spread (RC wave length) contracts (by S bound treos / number of quanta in photon packet) which increases load by 'square of free treos'.

The load in first dimension increases as 1+3+5+7........ $\sqrt{S}$ kinetons at total $\sqrt{S}$ quantum levels. To support this load 1 line of S bound treo at first quantum level is involved. At second quantum level for two quanta mass energy 2 lines fold once to support 4 free treo load at each apex bound treo along S/2 bound treos wave length. S/2 number of sub kinetic coloumns are formed each having 4 kinetons in two layers 1+3. At third quantum level for three quanta mass energy 3 lines (of one page of unit space matrix) fold twice to support 9 free treo load at each apex bound treo along S/3 bound treos wave length. S/3 number of sub kinetic coloumns each have 9 kinetons 1+3+5 in three layers. At fourth quantum level for four quanta mass energy 4 lines folds thrice to support 16 free treo load at each apex bound treo along S/4 bound treos wave length, thus form S/4 number of sub-kinetic coloumns each having 1+3+5+7 kinetons in four layers. Similarly at last √S quantum level for √S quanta mass energy √S lines (of one page of unit space matrix) folds √S times to support S free treo load (one quanta) at each apex bound treo along S/ √S bound treos wave length by √S layered sub kinetic coloumn and each having S kinetons.

Each Em wave involves S layers = Number of layers in each sub kinetic coloumn or frequency × total number of sub kinetic coloumns in wave or wave length, and n × S layers are involved to form n EM waves in one second.

Thus we notice that one more line is deformed to support one new added quanta mass energy (of one unit photon) in photon packet which increases at each next quantum level in first dimension.

Similarly in second dimension √S more bound treo layers are deformed (which adds one n th sub shell and 2n–1 orbitums in each shell) to support √S quanta mass energy (of one unit electron) in elementary particle packet which increases at each next quantum level.

These kinetic coloumns are wrapped on increasing mass energy at each next quantum level as different number of sub shells and shells along with the ‘localization energies’ in 8 different patterns to form 8 type of gluons of different size and shape, in highly condensed energy field of nucleus and produces strong forces.

While the W+, W-, Z particles i.e. bosons with their kinetic energy fields are responsible for weak forces as they can transport heavy mass-energy of alpha particles (four nucleons), beta particles (unit electrons) and gamma photon by distributing these mass energies as free treos on equal number of kinetons, in kinetic coloumns of W+,W and Z bosons. Thus by changing these particles in wave form they cross the nuclear barrier along with its riders to execute weak forces. The short wave length of these particles in the range of.10^{16} bound treos determines the short range of action of these particles of weak forces well inside nuclear boundary.

One unit mass is Planck mass of 2.16×10^{-8} *Kg* or S quanta mass energy in 3.44×10^{86} free treos or S^2 free treos which are supported by S^2 kinetons (in S orbitums) of one full kinetic / unit gravitational coloumn at one unit gravitational center named as one graviton.

The S^2 free treos of a unit mass (Planck's mass) is the maximum load which can be supported at one bound treo (by one graviton) on space-matrix in complete deformation up to second dimension. As this is natural upper limit of space-matrix, to support the load at a point, so it must decide the value of 'universal gravitational constant' of this universe, which is proposed in the treo model as 'S^2 bound treos per unit mass per second per second. (= $3.441937353 \times 10^{86}$ kinetons per unit mass, per second per sec).

The formation of one unit gravitational center (graviton) is the meeting point of 'quantum physics' and 'general theory of relativity' i.e. the union of physics of very small with physics of very large.

With the formation of 'one full kinetic / unit gravitational coloumn' to support 'one unit mass' at its 'one unit gravitational center (at one graviton), the story is not yet complete as 'one unit mass' is approximately equal to the mass of one egg of a flea. What about support to galaxies?

The same pattern continues in third and fourth dimensional deformation where S^3 free treos or S unit masses load is supported by S^3 bound treos in one unit space matrix by one electron black hole and S^4 free treo load at gravitational center of unit black hole is supported by S^4 bound treos by deformation / contraction of S unit space matrices in fourth dimension.

'√S unit mass-energy' (approx. of 10^{13} kg) is supported by S gravitons in one √S layered kinetic coloumn' at √S quantum levels, and this contraction is named as one '*Electron black hole'*.

One unit mass is supported at 'one graviton' by contraction of S^2 kinetons in one full kinetic /unit gravitational coloumn (it can be compared to last one page of book) which forms first layer of kinetic coloumn of third dimensional deformation.

At second quantum level of third dimensional deformation 4 unit mass load of two unit masses body, is supported at 4 'gravitons' by 4 'full kinetic/unit gravitational coloumns' (formed by 4 pages 1+3 of our cuboid book) in two spiral circles of kinetic coloumn. This second layer of kinetic coloumn is formed by contraction and wrapping of 3 additional full sheets (2n–1 in n^{th} layer) of unit space-matrix..

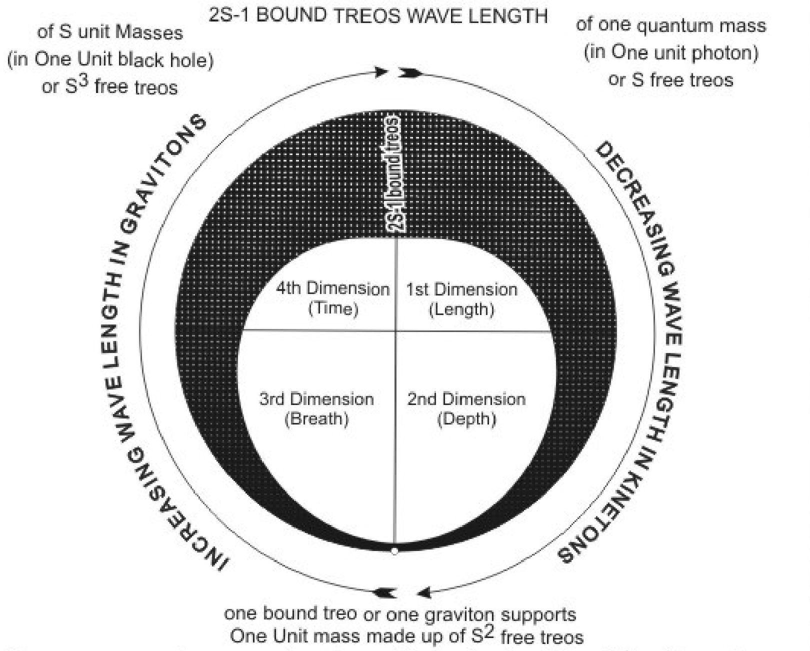
These sheets in increasing number (2n–1) in each bigger circular layer wrap at each (n^{th}) quantum level, to form each next layer of kinetic coloumn of third dimension. Thus √S unit masses are supported by square number of S gravitons (which come from total S sheets of one unit space-matrix) at √S quantum levels in one √S layered kinetic coloumn of third dimension (circle of the size of one electron) ; named as 'one electron black hole'. In nature this wrapping, of multiple 'full kinetic / unit gravitational coloumns', as incomplete contraction of third dimension can be visualized in satellite pictures of 'eye of a storm'.

We have noted that unlike the contraction in first and second dimension where the mass-energy gradually shrinks / folds on its reduced (wave) lengths and its load increases in square (square of free treos in first dimension and square of quanta in second dimension). While in third dimension with each increase of 'one unit mass' at each of next 'n^{th}' quantum level (total √S quantum levels) the 'mass pressure spreads on

2n–1 apex bound treos', but without the presence of any mass energy on these apex bound treos, along with increasing wavelength, is the start of formation of gravitational fields and gravitational forces. (D.4.4)

The contraction in fourth dimension is accomplished at √S quantum levels (in S layers of this gravitational sphere) with S^2 gravitons in total S 'electron black holes' placed according to proposed coloumn geometry (2n–1 gravitons in each n^{th} layer and n^2 in total).

It means in fourth dimensional deformation, one S layered gravitational sphere is formed for S unit masses cosmic body of 'one unit black hole' with its load of 'S^2 unit masses' (in square) at its gravitational center. Total S^2 gravitons are there in this kinetic coloumn of fourth dimension (in S 'electron black holes present in S layered gravitational sphere'), to support this S^2 unit masses load at its gravitational center. There are 2S–1 gravitons in outer most layer at periphery of this gravitational sphere (D.4.4).



The mass energy increases at under root S quantum levels in all four dimensions.

It increases by one unit photon (in unit of one quantum) in first dimension to form all photon packets, while it increases by one unit electron mass (in unit of under root S quanta) to form all elementary particles, all elements and atoms, up to one unit mass. The increasing mass energy condenses and spreads uniformly on shorter wave lengths from 2S-1 to just 1 bound treo @ (2S-1 bound treos / number of quanta mass energy in packet).

Mass energy increases in unit of one unit mass in third and in unit of under root S unit masses in fourth dimension, finally to form one unit black hole of S unit masses. In both dimensions it dilutes this increasing mass pressure (in square of unit masses) on increasing wave lengths, which increases from one bound treo to under root S bound treos in third dimension and then upto 2S-1 bound treos in fourth dimension along with, the deformation of Time @ reduction of one vibration in each inner layer of gravitational sphere.

Decreasing wave length in 1st and 2nd dimension and then it increases in 3rd and 4th dimensions

Diagrammatic representation of spread of load of increasing mass energy in all four dimensions

Diagram 4.4 : Wave Length or Spread of Mass-energy in all Dimensions

The ‘circular gravitational waves’ in all S layers of S layered gravitational sphere, move at different speeds with contraction of time by reduction of one vibration (of all bound treos) per layer towards center, and thus there will be no vibration at gravitational center (gravitational singularity) of S layered gravitational sphere of unit black hole, and the time will stop at this point.

This contraction of time in all layers of gravitational sphere is required to maintain co-planer rotations of all layers of kinetic coloumn with passage of time,it is required to direct all its vectors simultaneously towards its gravitational center to support a body,from all planes and from all directions. The contraction of time in gravitational sphere is reflected at each quantum level in gravitational field. That is why time slows down as the gravitational field strength increases, when we move towards the gravitational center of Sun.

Any multi unit mass body exerts its ‘diluted mass pressure’ (a) and load (ra) at each bound treo at ‘r’ distance in acceleration zone of gravitational (field) coloumn. This ‘ra’ is an action on each bound treo of space-matrix in this acceleration zone, to which it reacts by conversion of its local ‘potential energy’ into ‘(gravitational) kinetic energy’, by contraction (contraction) of equal number of bound treos into kinetons (v^2 kinetons which get arranged in v layered sub kinetic coloumns) to support this ‘diluted mass pressure’ of body at any point as ($ra = v^2$) in its gravitational field.

Thus ‘ra’ (action) is always equal to ‘v^2’ (reaction) at any point in whole area of ‘acceleration zone of body’.

The central load dilutes (with distance) on space-matrix towards periphery, with diluting ‘mass pressure of body’ which is supported by contraction of space-matrix in decreasing number of dimensions i.e. from third to second and finally in first dimension. The gravitational field fades in its last layer where the ‘diluted mass pressure’ of body is just ‘one free treo’ and is supported by ‘one bound treo’ (one kineton) beyond which no such force and field can be deducted.

In second dimensional contraction of ‘gravitational coloumn of Sun’ all planets are placed at 10^4 th quantum level and they move at different sub-luminal speeds (by v bound treo distance in one second) by v^2 gravitational kinetic energy in orbit. The revolution of planet in its orbit is an example of ‘propulsion by medium’. In first dimension, translational motion of all photon packets at the speed of light is also due to the ‘propulsion of photon packet by ground energy of medium

We see that in each dimensional deformation one kineton by its continuous vibrations continuously support one free treo.

This is quantum gravitation.

Proofs in Favor of the Treo Model of Quantum Gravitation with the example of Sun

(1) The electrons and planets revolve in their respective orbits by identical mechanism.

(2) Distance of any planet from center of Sun in terms of bound treo layers is calculated by formula (square of quantum number at which planet is placed × total number of layers in ‘gravitational sphere’ of cosmic body).

(3) The kinetic energy (of 8.7764439×10^{78} kinetons) in 10^{39} layered sub kinetic coloumns at 10^{17}th quantum level of second dimensional deformation, is equal to the gravitational kinetic energy v^2 in the orbit of

Mercury (8.7764439×10^{78} kinetons) at 10^4th gravitational quantum level of Sun which is generated in response to diluted mass pressure of Sun of 10^{39} quanta, at the orbit of mercury.

(4) The orbit of mercury is formed at 10^4 th quantum level of gravitational coloumn of Sun which is formed by union of 2×10^{38} full kinetic/ unit gravitational coloumns to support Sun (10^{38} unit masses body of Sun) .

(5) 3 km diameter (10^{38} bound treo layers); is the diameter of gravitational sphere of Sun; as calculated in the treo model and the same is calculated by ‘general theory of relativity’.

Time Slows Down in Gravitational Field

The time gap between two vibrations is increased by curtailing the number of vibrations per second, thus it increases ‘least reaction time’, and every change will now take more time or in other words the time will slow down locally.

In the contraction of fourth dimension of time, the number of vibrations (per second) of each layer of gravitational sphere is curtailed one by one in each layer from periphery of gravitational sphere towards the gravitational center of body. Thus angular velocity of all layers of gravitational sphere remains same and gravitational coloumn revolves like a disc and directs the vectors of all its gravitons towards its gravitational center simultaneously to support the load of unit black hole. This contraction of time in each layer of ‘gravitational sphere’ is also reflected at its corresponding quantum level in ‘gravitational (field) coloumn of body’. Thus with increasing ‘gravitational field strength’ in any ‘gravitational field’ the time slows down.

Principle of Equivalence and Inertia

Same kinetons which support the mass-energy (gravitational mass) also pin it down, is the basis of Principle of Equivalence

'Gravitational mass' and 'inertial mass' of any body are, always equal.

Or in other words the force required to break inertia of a body (to just move it from its position of rest) is exactly equal to 'gravitational mass' (weight) of this body; this is the principle of equivalence, which is already known, but not explained.

Our three dimensional bodies are just the collection of elementary particles, all produced by contraction in second dimension. The nucleons are composite particles, which are formed by union of some elementary particles.

As the elementary particles are supported and then pushed (i.e. rotated and supported by, one by one vibrations of all shells in wave length and then only they are shifted to next bound treo in orbit to revolute) but at less then the speed of light; these kinetic coloumn of second dimension provides gravitational support and (partial) inertia to all elementary particles.

The increasing vector of second dimension with its S^2 kinetons provides gravitational support along with this it imparts total inertia to unit mass made up of S^2 free treos. As the same 'bound treos' (same contraction) which support unit mass by forming one 'full kinetic/unit gravitational coloumn' are also 'pinning it down' to provide it inertia; so the inertial and gravitational mass of all bodies (made up of multiple unit masses and supported by multiple full kinetic/ unit gravitational coloumns) will always be exactly equal.

It is to be noted that when stationary multiple unit mass body starts moving in any one direction, its ‘load spreads with time’ and distributes on all apex bound treos of its path in ‘increased length with time’ (increased reduced Compton wave length [6] with increased number of apex bound treos or increased number of sub kinetic coloumns in wave), but in turn its frequency (bound treo layers in each sub kinetic coloumn) and angular momentum both reduces. (thus moving bike with reduced angular momentum does not fall easily and by 'distributing their load on space matrix with time' our planes fly)

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1. [Planck’s least length = 1.616199×10^{-35} meter ($L_0 = G \times h/c^3$) is postulated as the size of bound treo]: Number of bound treos in one meter = 1 meter / 1.616199×10^{-35} meter = $0.61873569 \times 10^{35}$ bound treos.

2. One unit mass = 2.17623×10^{-8} kg (about the mass of flee egg).

3. 10^{62} matches with the present size of our still contracted universe of 13.7 light years.

4. Sun moves in its orbit at 480 km per second, around center of ‘galactic black hole’ affected both by gravitational forces of galactic center; and effect of cosmological constant as very long distances are involved (expansion of universe).

5. In transfer of heat, one full layer (and 2n–1 thermions in n^{th} layer of thermodynamic coloumn, as per temperature of body) from thermodynamic coloumns of ‘heat transferring body’ are added in ‘thermodynamic coloumn of receiving body’ and any discrepancy of number of bound treos (thermions) in between (these two layers) goes to thermodynamic Sink’ (i.e. spreads on near by space-matrix as one thermion on one undeformed bound treo).

6. In the treo model all elementary particles (are not point masses as conventionally believed) distributes its mass-energy uniformly in its packet and spread on its wavelength. [Reduced Compton wavelength = S/n (S bound treos length / ‘n’ quanta mass-energy in packet)].

PLANETS AND SATELLITES

This chapter will explain :

At which quantum level of parent gravitational field will the baby body condense?

By which formula the distance of this quantum level from parent body can be calculated?

How gravitational kinetic energy levels in parent gravitational (field) coloumn fixes the position of all baby bodies ?

How frequency of matter wave in orbit, is equal to the speed of revolution of the baby bodies placed in this orbit?

Why planet revolve prograde or retrograde?

Biggest baby body of any parent body is placed at which quantum level of its gravitational field and how asteroid belts are formed?

What forms rings of Saturn?

What decides configuration (gaseous or solid nature) of the body of planet?

How distal gravitational coloumn of planet get tilted by proximal presence of a heavy satellite?

How geothermal energy (heat of planet) is produced which results in molten state of earth's interior, and movement of tectonic plates which in turn is responsible for Earth quakes, volcanic eruptions and tsunamis?

Planets And Satellites (General Understanding)

(A) All baby bodies condense in 10 planetary quantum levels between 10^4 th and 10^5 th quantum level of any gravitational (coloumn) field

All planets of inner solar system are placed at ten planetary quantum levels in between 10^4 th to 10^5 th quantum level, and so are the satellites of all four outer planets (Jupiter, Saturn, Uranus and Neptune) while planetoid of outer solar system are in bound treo layers of 10^5 th quantum level.

Sun is made up of 10^{38} unit masses ($10^{38} \text{ x } 10^{86} = 10^{124}$ free treos). The gravitational sphere of Sun is made up of 10^{38} layers (3 Km diameter which is same as calculated by general theory) and have $(1 \times 10^{38})^2$ gravitons in its gravitational sphere which support $(10^{38})^2$ unit masses load at its gravitational center.

The gravitational (field) coloumn of Sun is formed by extension of $2 \times 10^{38} - 1$ full kinetic unit gravitational coloumns at $2 \times 10^{38} - 1$ gravitons which support 10^{38} unit masses of body of Sun at the periphery of 10^{38} layered gravitational sphere.

According to coloumn geometry 1×10^{38} , 3×10^{38}, 5×10^{38} and 7×10^{38} layers are added at 1st, 2nd, 3rd and 4th quantum level in gravitational field of Sun ......and so on upto $\sqrt{S}$ quantum levels or total 10^{59} bound treo layers are deformed to form gravitational field (coloumn) of Sun.

Thus the distance in bound treo layers upto any quantum level in any gravitational field can be determined and = square of quantum level number × number of bound treo layers in gravitational sphere of cosmic body.

(B) Each layer of this gravitational (field) coloumn have enough kinetic energy which can support total mass pressure of body of 2MG

All sub kinetic coloumns in matter wave of any layer (orbit) at any quantum level in gravitational field has equal kinetic energy which can support 2MG mass pressure of M unit mass parent body (e.g Sun).Thus each bigger layer with more number of sub kinetic coloumns but of decreasing kinetic energy forms in third, second and then in first dimension. Finally one deformed bound treo (kineton) support one free treo load (diluted mass pressure of body or Sun) in one biggest (last) layer at periphery of gravitational field.

Total v^2 number of kinetons in each one sub kinetic coloumn ($v^2 = MG/r$) × Number of sub-kinetic coloumns in matter wave on all apex bound treo (or shells) in gravitational field of body (e.g. Sun) = total 2MG mass pressure of any cosmic body.

(C) Orbital speed of baby body; ‘v’ number of bound treos [$v = \sqrt{(MG/r)}$], is the distance traveled per second by weight less ‘point mass’ of any baby body (as the individual gravitational field of baby body has already neutralized its mass pressure on space matrix), in its orbit formed in second dimensional deformation of its parent gravitational field (this is true for point mass of any electron, any elementary particle, any planet or any star orbiting in matter wave of its parent body) and v = quantum level or Frequency of matter wave in orbit.

(D) All Cosmic bodies are more or less spherical as their mass energies are fully contained in three dimensional deformation of their gravitational fields.

Exceptions:

- Rings of Saturn are formed along its orbitums, as the mass of its gaseous body extends further outwards in the second dimensional deformation of its own gravitational (coloumn) field.

- Total condensed mass of ‘Unit Black hole’ is contained inside its gravitational sphere in its four dimensional deformation, (or one unit mass at one bound treo at outer most layer of gravitational sphere) in very strong gravitational field of ‘unit black hole’ and while rotating at the speed of light they are invisible.

(E) Biggest planet of our solar system broke down to form asteroid belts.

We find asteroid belts in place of expected orbit of biggest Planet of Sun at third sub quantum energy level with gravitational kinetic energy $E/(3)^2$ [e.g. As all four outer planets (of solar system) also harbor their respective biggest satellites at this energy level of $E/(3)^2$ i.e. 3rd energy level between 10^4th and 10^5 quantum level] .

(F) Heavy satellites bends gravitational (field) coloumn of parent body, and other distal satellites are placed (immediate after this heavy satellite) in more inclined distal orbits.

Position of all baby bodies are (or all baby bodies condenses) at 10^4th quantum level in second dimensional deformation of any gravitational coloumn of parent body

In case of Sun and for all ‘outer planets’ it is calculated, that their baby bodies condense primarily, at 10^4 th quantum level in their respective parent gravitational coloumns. Author advocates that it is universal phenomenon that baby bodies of all cosmic bodies will condense primarily, at 10^4 th quantum level in their respective gravitational field.

Position of Planets in Gravitational Coloumn of Sun

Gravitation is a short range phenomenon and distance of any quantum level in gravitational field of parent body can be calculated in terms of number of bound treo layers.

The distance in bound treo layers (from center of cosmic body) upto any quantum level in any gravitational field = square of quantum level number × number of bound treo layers in gravitational sphere of cosmic body.

These calculations will be valid for any cosmic body (Sun, Earth, Moon etc. having a gravitational sphere). vice-versa by knowing the quantum number of parent gravitational field at which a baby body is placed, we will know about its matter wave and most of things about baby body accordingly.

In case of Sun (10^{38} unit masses body with 10^{38} layers in its gravitational sphere) there are 1×10^{38} bound treo layers at first quantum level, 3×10^{38} bound treo layers adds at second quentum level, 5×10^{38} new bound treo layers adds at third , and $2n-1 \times 10^{38}$ bound treo layers adds at any n th quantum level and total n^2 bound treo layers are there upto n th quantum level.

By above formula in case of Sun, the number of bound treo layers which correspond to 10^4 th quantum level (at which planet Mercury is placed) can be calculated; and at multiple of this distance, all 10 planets are placed at 10 ‘planetary quantum levels’ between 10^4 th ‘quantum level’ (10^{46} th bound treo layers) and 10^5 th ‘quantum level’ (10^{48} th bound treo layers) (see Table 4)

10^4 th ‘quantum level’ in gravitational field of Sun is 10^{46} bound treo layers away from its own gravitational center as calculated below

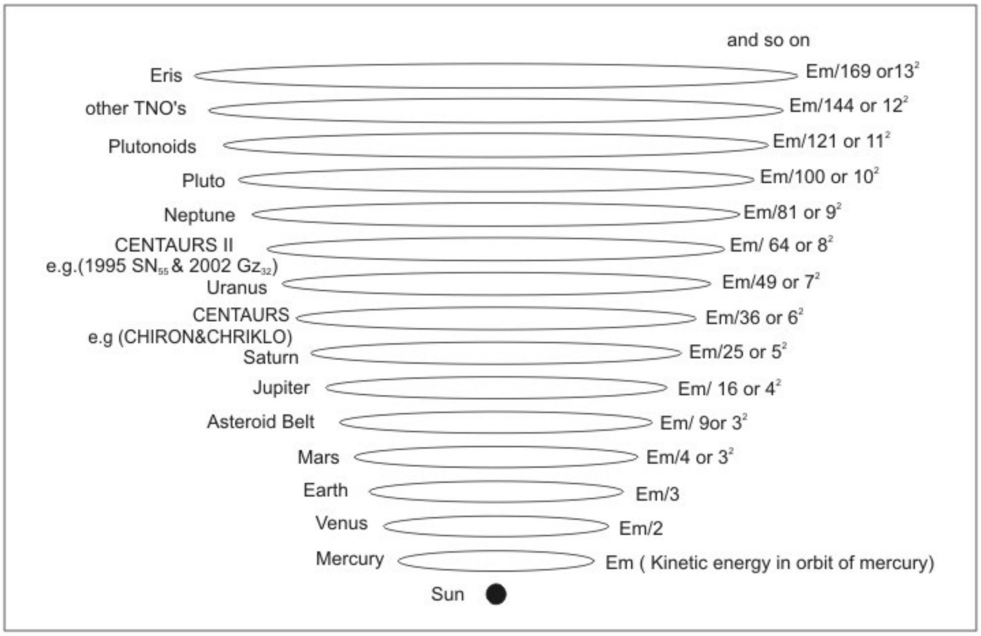
10^8 or $(10^4)^2$ as square of quantum level × 10^{38} bound treo layers in gravitational sphere of Sun = 10^{46} th bound treo layers in gravitational (field) coloumn of Sun from its gravitational center And. There are 10 ‘planetary quantum levels’ between 10^4th and 10^5th ‘quantum level’ at which all (big) planets are placed

Planetary orbits are formed at definite energy levels

We can calculate the kinetic energy ‘E_m’ [total number of kinetons (v^2) in one ‘sub kinetic coloumn’ (according to formula $v^2 = MG/r$)] at 10^4 quantum level in gravitational coloumn of sun, at which lies the planetary orbit of our first planet Mercury’.

If E_m is Gravitational kinetic energy present in each sub kinetic coloumn along wave length in the orbit of planet Mercury, at ‘first sub shell of 10^4 th planetary quantum level’ (D.4.5 : Kinetic energy in planetary orbits).

This kinetic energy E_m,in each sub kinetic coloumn in the orbit of Mercury can be calculated as;$E_m = v^2 = MG/r = (3.145233887 \times 10^{124}/ 0.3583722239 \times 10^{46}) = 8.776444393 \times 10^{78}$ kinetons (where MG is weight of Sun in free treos and r is the distance of mercury from gravitational center of Sun)



Planetary orbits (energy levels)

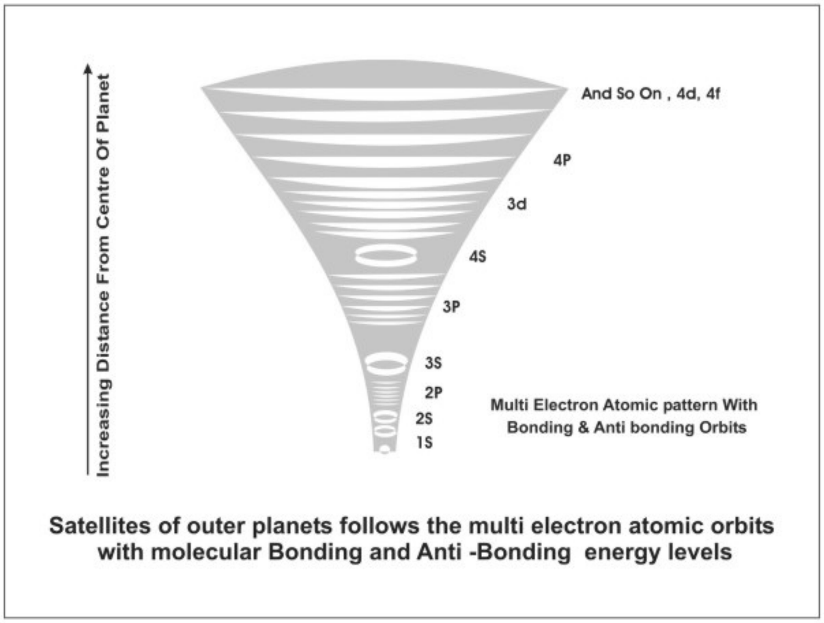

Increasing Distance From Centre Of Planet
And So On , 4d, 4f
4P
3d
4S
3P
3S
2P
2S
1S
Multi Electron Atomic pattern With Bonding & Anti bonding Orbits
Satellites of outer planets follows the multi electron atomic orbits with molecular Bonding and Anti -Bonding energy levels

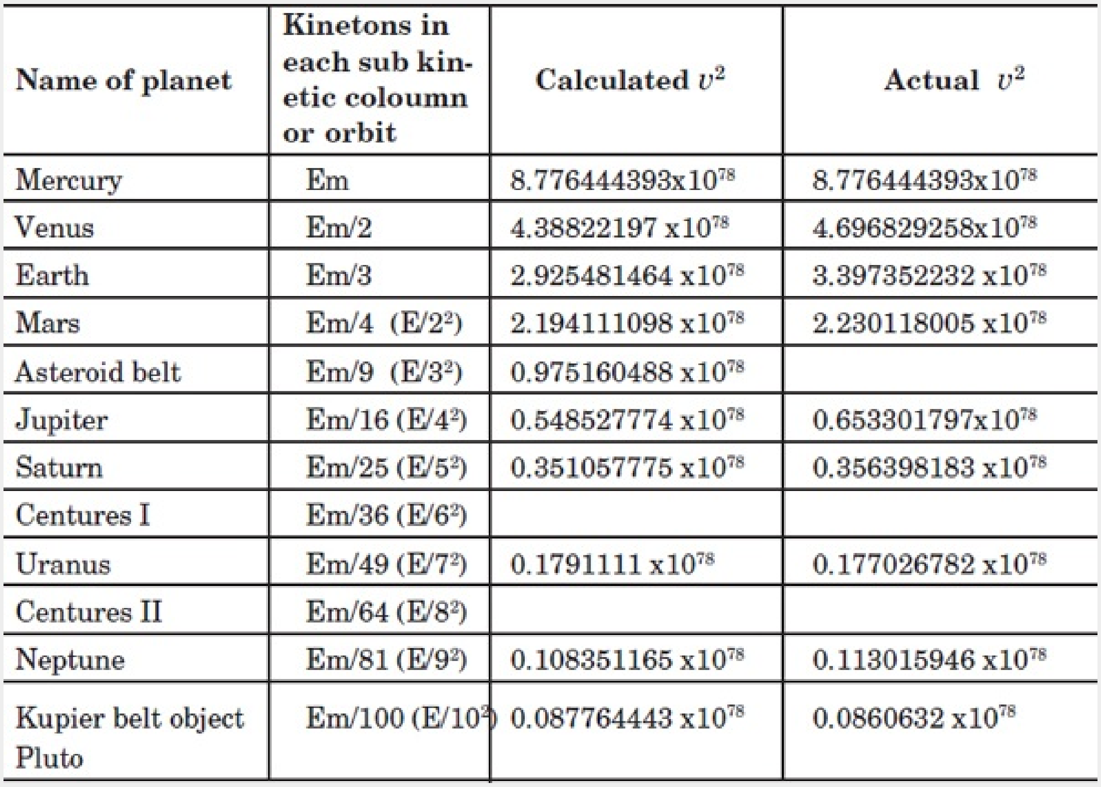
Diagram 4.5 : Placement of planets, satellites or electrons follow same

s,p,d,f atomic pattern.

(1) Gravitational kinetic energy of Mercury or E_m divides as $E_m/2$ (or $v^2/2$ kinetons) which is energy present in each 'sub kinetic coloumn' in the orbit of Planet Venus which is placed in second sub shell of first planetary quantum level.

(2) Similarly at $E_m/3$ kinetons energy is present in each 'sub kinetic coloumn' in the orbit of Planet Earth which is placed in third sub shell of first planetary quantum level.

This gravitational kinetic energy 'E_m' reduces by 'square of planetary quantum number', at which the planet is placed.



Name of planet	Kinetons in each sub kinetic coloumn or orbit	Calculated v^2	Actual v^2
Mercury	Em	8.776444393x10^{78}	8.776444393x10^{78}
Venus	Em/2	4.38822197 x10^{78}	4.696829258x10^{78}
Earth	Em/3	2.925481464 x10^{78}	3.397352232 x10^{78}
Mars	Em/4 (E/2^2)	2.194111098 x10^{78}	2.230118005 x10^{78}
Asteroid belt	Em/9 (E/3^2)	0.975160488 x10^{78}	
Jupiter	Em/16 (E/4^2)	0.548527774 x10^{78}	0.653301797x10^{78}
Saturn	Em/25 (E/5^2)	0.351057775 x10^{78}	0.356398183 x10^{78}
Centures I	Em/36 (E/6^2)		
Uranus	Em/49 (E/7^2)	0.1791111 x10^{78}	0.177026782 x10^{78}
Centures II	Em/64 (E/8^2)		
Neptune	Em/81 (E/9^2)	0.108351165 x10^{78}	0.113015946 x10^{78}
Kupier belt object Pluto	Em/100 (E/10^2)	0.087764443 x10^{78}	0.0860632 x10^{78}

TABLE 4 **POSITION OF PLANETS IS DECIDED BY QUANTUM ENERGY LEVELS**

E_m /100 or (E/10^2) Pluto and Plutinos : Orcus 90448 (2004 DW), Luxion (2001 KX_{76}), 2202 Tx_{300} (55636), 2003 EL_{61} (136108), Quaor 2002 LM_{60} (50,000)

$E_m/11^2$ Subewanos : 2005 FY_9 (136472) , 2002 AW_{197}

Scattered Disc Objects :

$E_m/12^2$ 2002 Tc $_{302}$, 2001 XR $_{190}$, 2002 YW $_{134}$

$E_m/13^2$ Eris (2003 Ub $_{313}$) Tenth planet ,

$E_m/14^2$ 2005 TB $_{190}$,1996 TL $_{66}$ (15874) ,

$E_m/15^2$ 2001 FZ $_{173}$, 1996 GQ_{21} ,

$E_m/16^2$ 2003 FX_{128} ,

$E_m/17^2$ 2004 PB_{112} .

Outer Solar System :

$E_m/18^2$ 1999 RD_{215} , 2000 PJ_{30} ,

$E_m/21^2$ 2005 PU_{21} , 2003 HB $_{57}$,

$E_m/24^2$ 2001 FP $_{185}$,

$E_m/30^2$ 2004 VN_{112} ,

$E_m/35^2$ Red Planetoid Sadna 2003 VB $_{12}$,

$E_m/40^2$ 2002 OO $_{67}$,

$E_m/49^2$ 2006 Sq $_{372}$.

Position of Planetary Orbits

The Mercury, Venus, Earth are at K, L, M energy levels in first sub shell of first planetary quantum number ‘n_1’. First planetary quantum number ‘n_1’ is at a distance of 0.3×10^{46} bound treo layers from gravitational center of Sun at which planet Mercury is placed in first sub shell. This is taken as one unit distance for referring the distance of other planets from center of Sun

In second sub shell of first planetary quantum number ‘n_1’ at double the unit distance ($2 \times 0.3 \times 10^{46}$ bound treo layers) and $E_m /2$ energy level (at L energy level of first quantum level) the planet Venus is situated;

while at three times the unit distance ($3 \times 0.3 \times 10^{46}$ bound treo layers) and $E_m/ 3$ energy (M energy level of first quantum level) in third sub shell the planet Earth is placed. (D.4.5).

While Mars at ‘N’ energy level, can also be leveled at second planetary quantum number ‘n_2’ . At planetary quantum level 2, at $(2)^2$ i.e. four times of unit distance and $E_m /4$ energy level the planet Mars is placed;

at planetary quantum level 3 at $(3)^2$ i.e. 9 times the unit distance and $E_m / 9$ energy level the ‘Asteroid belts’;

at planetary quantum level 4 at $(4)^2$ i.e.16 times of unit distance the Jupiter with $E_m / 16$ energy level;

at planetary quantum level 5 at $(5)^2$ i.e. 25 times the unit distance the Saturn with $E_m / 25$ energy level and so on are placed,

Similarly at planetary quantum level 6 at $(6)^2$ with E / 36 times energy level i.e. 36 times of unit distance the 1977 UB (CHIRON) / and ‘CHRIKLO 1997 SU26 at planetary quantum level 7 at $(7)^2$with E_m / 49 times of energy level i.e. 49 times of unit distance away the Uranus is placed .

at planetary quantum level 8 at $(8)^2$ with E_m / 64th energy i.e. 64 times of unit distance the “1995 SN 55”

at planetary quantum level 9 at $(9)^2$ E_m / 81 times of energy i.e. at 81 times of unit distance away the Neptune with is placed.

While Pluto demoted from a full planet at planetary quantum level 10 at $(10)^2$ with E_m / 100 energy concentration i.e. 100 times of unit distance is exactly placed at planetary quantum level 10 and thus compels us to re-consider the Pluto as a full planet.

At 10^5th quantum level from Sun $[(10^5)^2 = 10^{10}$th $\times 10^{38}$ layers] in 10^{48} layers in gravitational field of Sun the outer solar system exists.

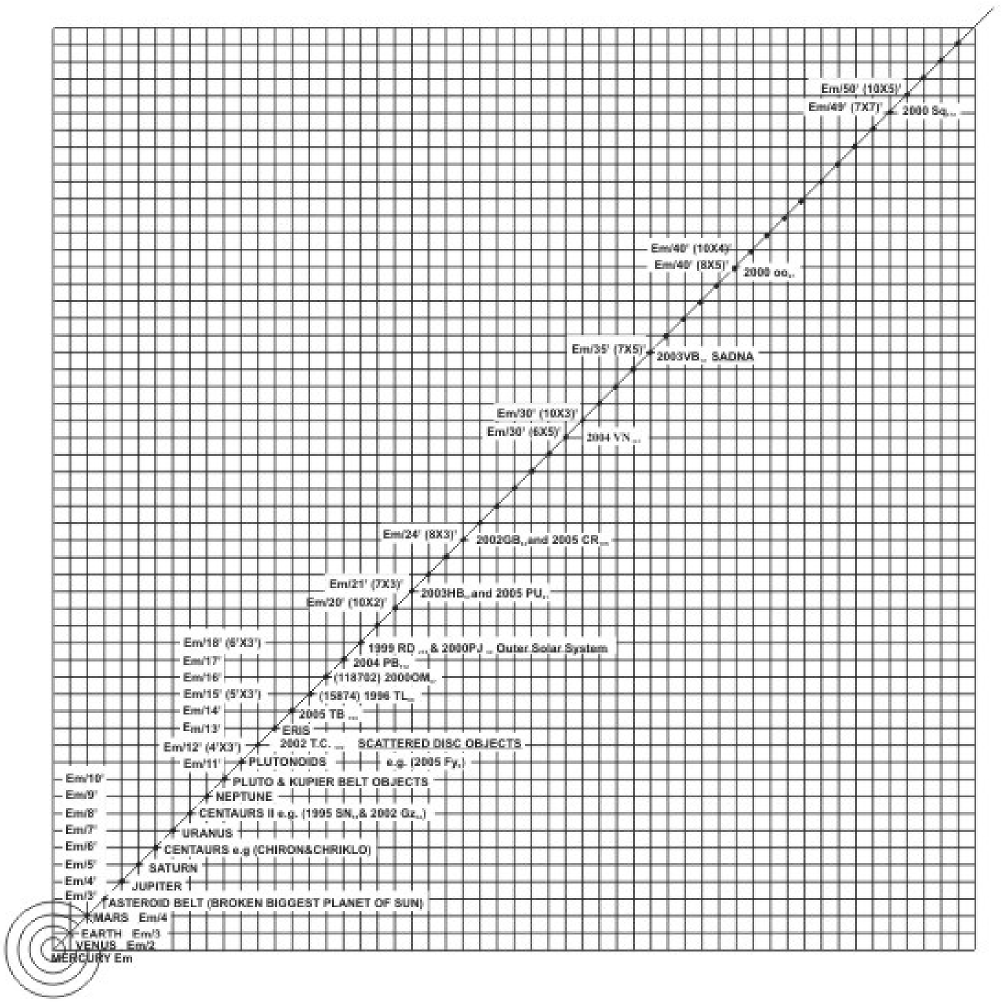
Planetoids are at 18th planetary quantum level i.e. 18th (3 × 6) level and also seen at 21st (3 × 7), 35th (5 × 7), 24th (3 × 8), 40th (5 × 8), and at 49th (7 × 7) planetary quantum levels. (D.4.6).

Revolution of Planets

All Baby Bodies Revolve in Second Dimensional Deformation of Legend gravitational Field of Parent body.

We will take the example of Electron in atomic orbits, to understand rotation and orbital motion (revolutions) of all baby bodies in second dimensional deformation of legend gravitational field.

Out of S vibrations in one second, by √S vibrations (one by one vibration of √S shells in √S bound treo wave length) the ‘wave packet of electron’ rotates once and after each rotation the Electron packet is pushed to next bound treo, and this process is repeated √S times in one second (in S vibrations of one second), to push Electron mass by √S bound treos in its orbit in one second. Thus electron rotates √S times and revolves in its orbit by √S bound treo distance in one second.



Energy level in the orbit of planets, as calculated in respect of energy level in the orbit of mercury

Diagram 4.6 : Graph of kinetic energy in orbit of

planets

A body acts as weight less ‘Point mass’ in parent’s legend gravitational field, after neutralization of its total load or mass pressure , by its own gravitational field.

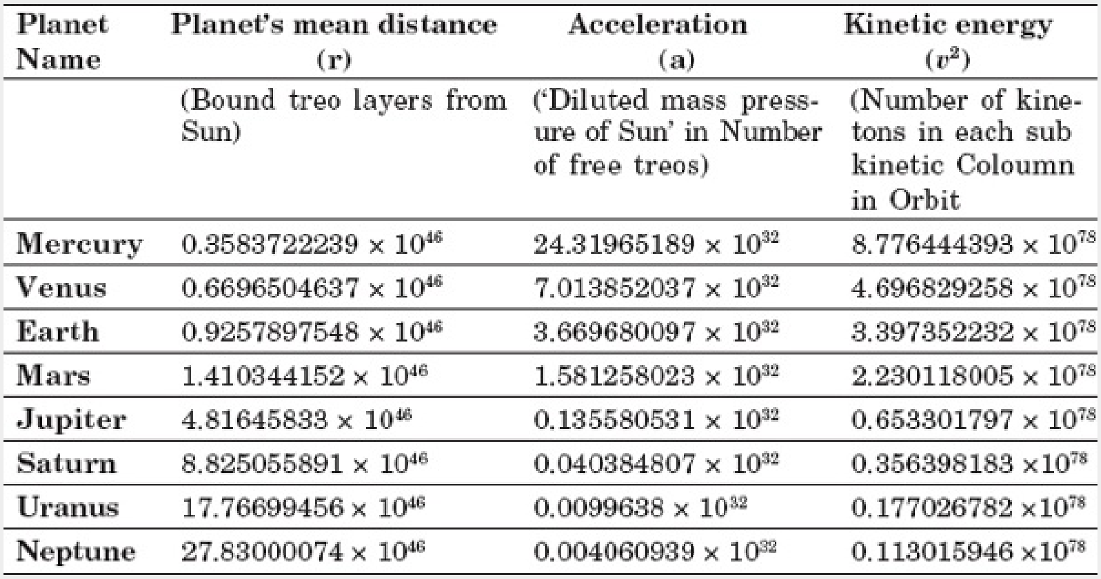
All the bodies (heavy or light) after neutralization of their ‘individual mass pressures’ by their own individual gravitational fields, behave as weight less ‘point masses’ on space matrix.[As observed by Galileo, Big or small bodies when dropped simultaneously from ‘leaning tower of Pisa’ fell on Earth at the same time and all behaved as weight less point masses].

Similarly, it should be noted that the ‘orbital motion of all Planets’, big or small is not affected by their individual different masses (as the mass pressure of their bodies are already neutralized by their individual gravitational fields), so these planets revolve at speed v bound treos per second (as weight less ‘symbolic point masses’0, only according to the strength of ‘gravitational kinetic energy’ (of ‘v^2’ kinetons) of Sun in this ‘planetary orbit’.

In gravitational field of Sun at any point at a distance ‘r’, the ‘point mass’ of planet will revolve in its orbit at the velocity of ‘v’ bound treo distance per second by the kinetic energy (of ‘v^2’ kinetons) in ‘v’ layered sub kinetic coloumns present in wave length, in the layer forming orbit (D.4.7 : Speed of revolution).

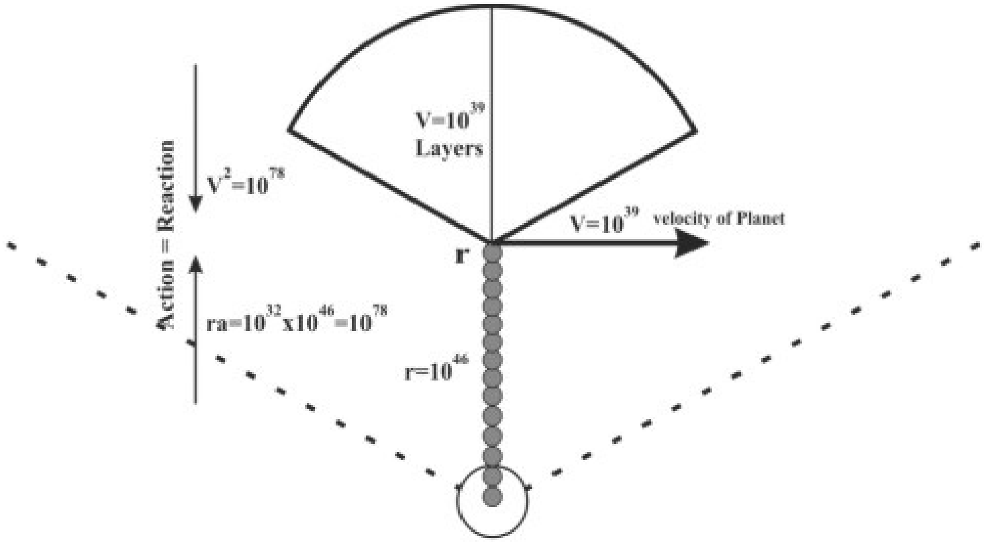
When ‘a’ is diluted mass pressure of Sun in planetary orbits, then ‘ra’ is of 10^{78} free treos ($10^{78} = 10^{46} \times 10^{32}$ free treos) it is an action at 10^4 quantum level in planetary orbit, [placed at distance ‘r’ (10^{46} bound treo layers) where ‘a’ is ‘diluted mass pressure of Sun’ (of 10^{32} free treos)] on all bound treos; it generates equal kinetic energy of v^2 or 10^{78} kinetons in all sub kinetic coloumns of planetary orbit in a reaction. All planets revolve in their individual orbit by v which is 10^{39} bound treo distance (under root of 10^{78}) per second by this v^2 kinetic energy.

Point mass of any body (planet or satellite) rotates as well as revolve; in their respective orbits by matter waves and follow the same mechanism of rotation and revolution as described for electrons.



Planet Name	**Planet's mean distance (r)**	**Acceleration (a)**	**Kinetic energy (v^2)**
	(Bound treo layers from Sun)	('Diluted mass pressure of Sun' in Number of free treos)	(Number of kinetons in each sub kinetic Coloumn in Orbit
Mercury	$0.3583722239 \times 10^{46}$	$24.31965189 \times 10^{32}$	$8.776444393 \times 10^{78}$
Venus	$0.6696504637 \times 10^{46}$	$7.013852037 \times 10^{32}$	$4.696829258 \times 10^{78}$
Earth	$0.9257897548 \times 10^{46}$	$3.669680097 \times 10^{32}$	$3.397352232 \times 10^{78}$
Mars	$1.410344152 \times 10^{46}$	$1.581258023 \times 10^{32}$	$2.230118005 \times 10^{78}$
Jupiter	$4.81645833 \times 10^{46}$	$0.135580531 \times 10^{32}$	$0.653301797 \times 10^{78}$
Saturn	$8.825055891 \times 10^{46}$	$0.040384807 \times 10^{32}$	$0.356398183 \times 10^{78}$
Uranus	$17.76699456 \times 10^{46}$	0.0099638×10^{32}	$0.177026782 \times 10^{78}$
Neptune	$27.83000074 \times 10^{46}$	$0.004060939 \times 10^{32}$	$0.113015946 \times 10^{78}$

TABLE 5 :**ACTION** $ra = v^2$ **REACTION**



Diluted mass pressure of Sun ‘a’ at distance ‘r’ produces a action ‘ra’, which is reacted by formation of ‘v’ layered kinetic coloumn made up of v^2 kinetons, which propels the ‘Point mass of planet’ by ‘v’ bound treo distance per second.

Diagram 4.7 : Speed of Revolution

Rotation of Planets

(1) Direction of rotation of planet by its own rotating gravitational Kinetic coloumn.

The clockwise rotating layers at the speed of light in gravitational sphere of a body (Sun) and the layers of it's ‘gravitational coloumn’ at gradually reducing speeds will accelerate the far side of planet less, then the near side of planet from Sun, this will rotate the body of the planet anti clockwise at its own axis: as most of planets and satellite rotate.

But the Uranus rotates clockwise in spite of its anti clockwise rotating gravitational coloumn, due to tilt of its axis of rotation by 97.8° (more then 90°). Visualize it, start tilting a ball rotating anti clockwise on its axis, at 90° it will start rolling forward. Now go on tilting for further 8°, now the same rotation of ball will be seen clockwise; hence Uranus rotate clockwise i.e. retrograde due to rotation of its own kinetic coloumns. Similarly Pluto tilted by 118° and Venus tilted by 177° rotates retrograde or clockwise.

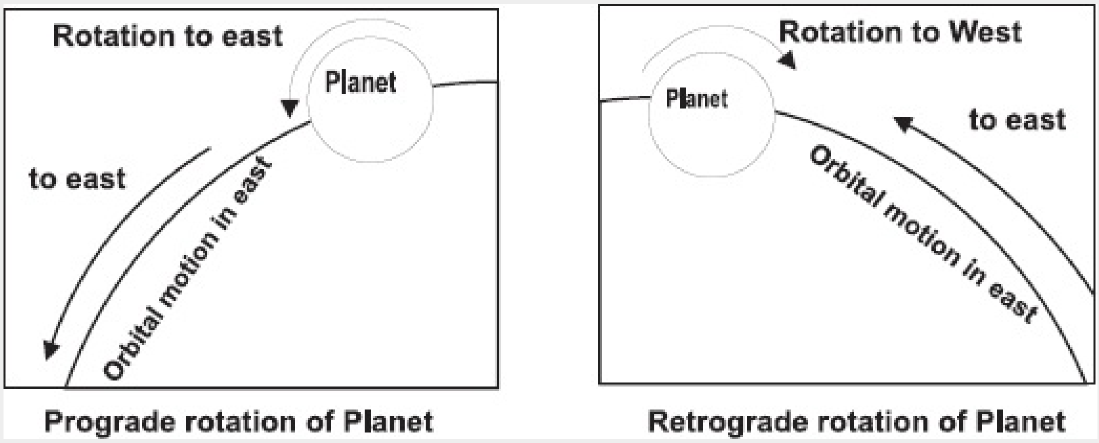
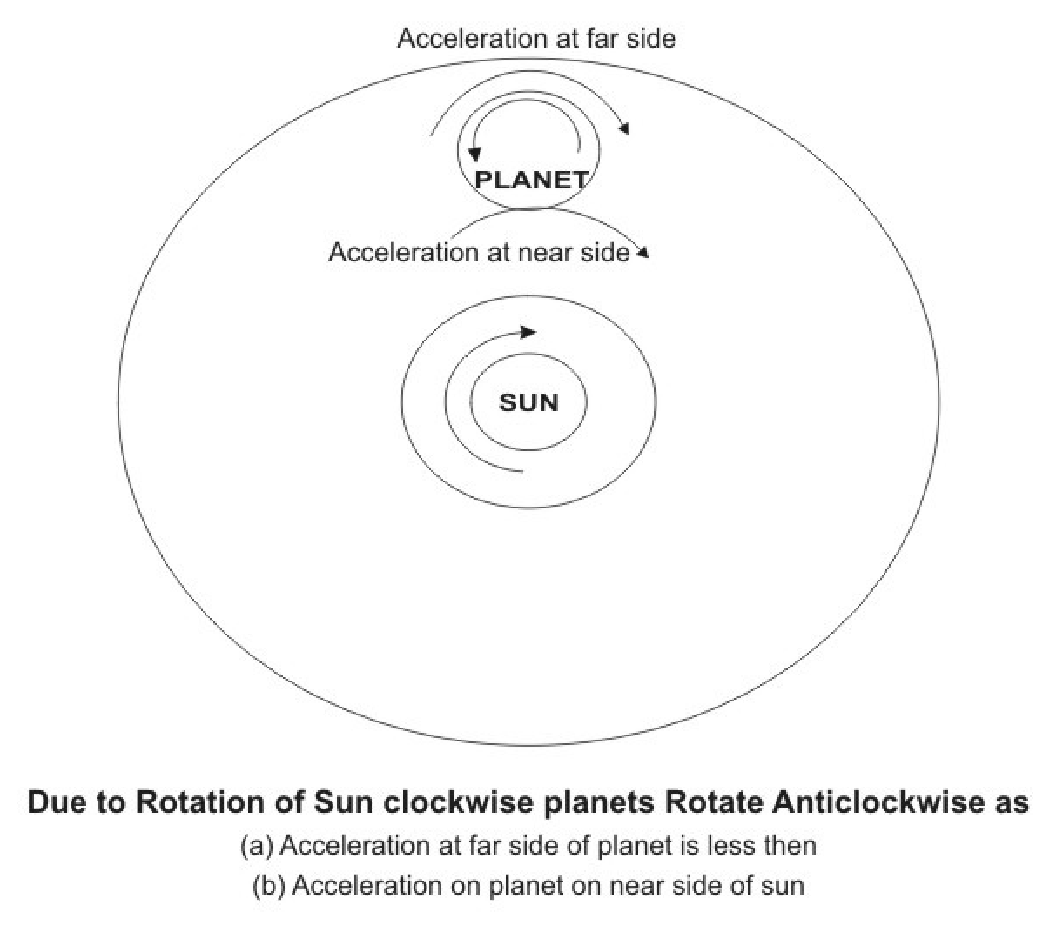


Diagram 4.8 (1) Prograde rotation of planet & (2) Retrograde rotation of planet

(2) Rotation of planet due to the rotation of gravitational coloumn of parent body i.e. Sun.

The body of Planet is not a ‘point mass’. Any point at equator of planet facing the Sun is nearer to Sun, then the point on equator at opposite side of planet and away from Sun. The speed of rotation of layers of gravitational coloumn of Sun, on the (proximal) point at equator of planet is slightly more due to increased value of v^2 (MG/r), then the speed of layers on the far side (distal) of planet.

The uneven kinetic push on two sides of planet by these rotating layers of wave at different speed will rotate the body of Planet. The Sun rotating clockwise along with its rotating gravitational coloumn will impart the uneven push on two sides and it will rotate the planet anti-clockwise.



Due to Rotation of Sun clockwise planets Rotate Anticlockwise as

(a) Acceleration at far side of planet is less then

(b) Acceleration on planet on near side of sun

Diagram 4.9 : Effect of gravitational field (coloumn) of Sun

(1) According to $v^2 = MG/r$, the point nearest towards Sun on planet Earth is getting a forward kinetic push of 4.572747 km per hour more than the farthest point from Sun on earth.

(2) Difference in circumference of revolution path of near point and farthest point of Earth in one year around sun. The near point moves fast on shorter circumference and produces a uneven push on globe of Earth.

The path of orbit of revolution of farthest point from Sun of Earth is greater by 80107.714 km per revolution in one year then that of its nearest point.

Due to above factors which provides uneven push on two side of globe all planets and most of satellites rotates direct i.e. anti-clock wise from west to east (D.4.9).

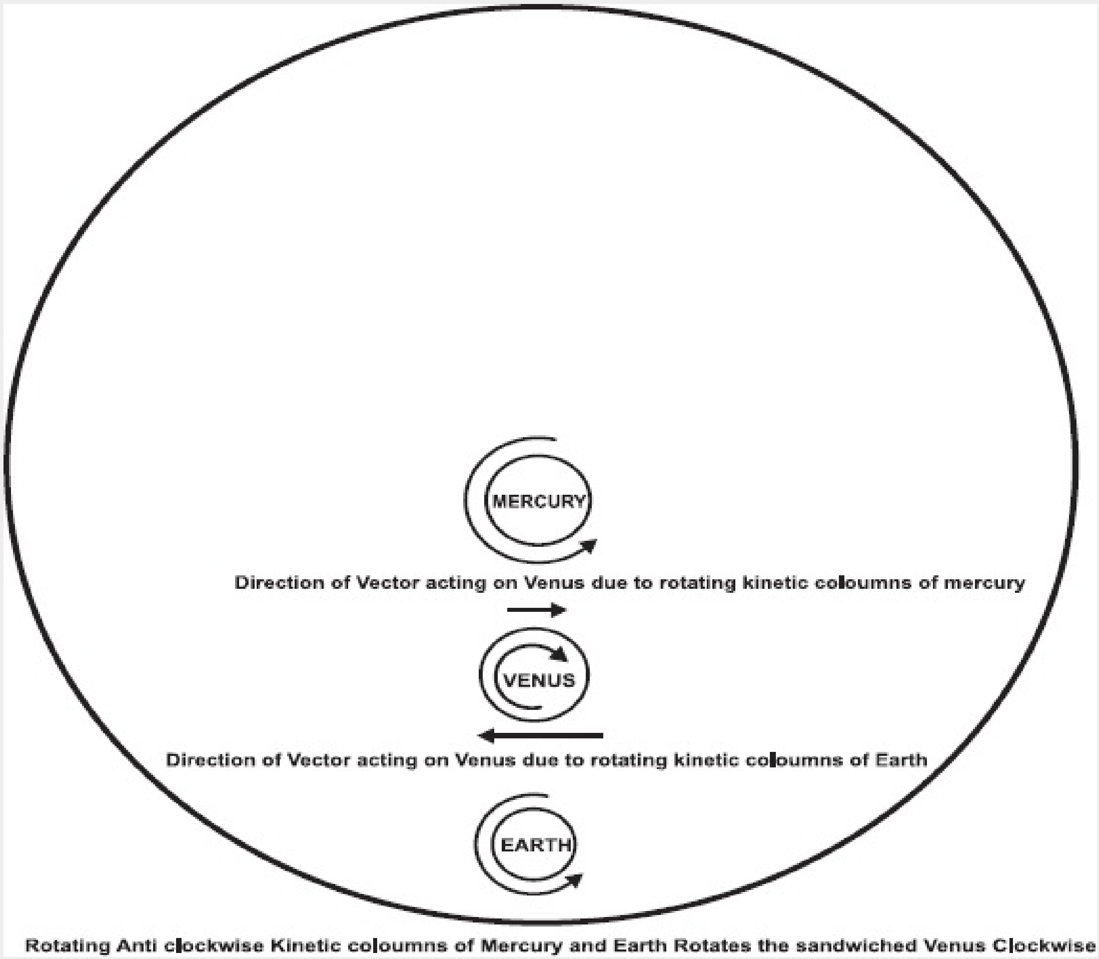

MERCURY
Direction of Vector acting on Venus due to rotating kinetic coloumns of mercury
VENUS
Direction of Vector acting on Venus due to rotating kinetic coloumns of Earth
EARTH
Rotating Anti clockwise Kinetic coloumns of Mercury and Earth Rotates the sandwiched Venus Clockwise

Diagram 4.10 : Effect of rotation of Local Space-matrix Result in Retrograde Rotation of Venus

(c) Effect of rotation of surrounding space-matrix of near by planets on sandwiched Venus

Effect of rotation of space-matrix anti-clockwise due to rotating kinetic coloumns of Earth (on far side) and Mercury (on near side) will rotate sand witched Venus clockwise (Slow retrograde rotation of Venus) (D.4.10)

Configuration of Planets in Gravitational Field of Sun

You must have watched in a transparent water container, the water bubble while rising from depth (more compressed by increased water pressure all around in depth) towards surface (less compressed by reduced water pressure towards surface) expands.

Similarly the physical configuration of any planet is decided by the kinetic and potential energy ratio in surrounding deformed (contracted) space-matrix [1].

So the configuration of Planet (molecular configuration, state of matter, mass density and atmosphere of planets) depend on their distance (semi major axis) from Sun and depend on the degree of deformation of space around them e.g. Venus have dense carbon di oxide atmosphere, the outer planets are just gaseous giants.

Formation of Planetary Orbit

by joining of matter waves of multiple 'full kinetic /unit gravitational coloumns' which unite to form gravitational field of Sun.

(1) The kinetic energy in matter wave at 6.8×10^{17}th quantum level of second dimensional deformation matches with the orbit of Mercury.

At 6.8×10^{17}th quantum level the mass-energy of 2.9625×10^{39} quanta mass (5.495×10^{83} free treos) when divided at 0.6263×10^{4} apex bound treos in R C wave length exerts load of 8.77644×10^{78} free treos on each apex bound treo, which get supported by equal number of 8.77644×10^{78} kinetons in 2.9625×10^{39} layered shells.

All shells in this wave length together support 2.9625×10^{39} quanta mass energy. The 2.9625×10^{39} is frequency of wave which is also the orbital speed of particle, in number of bound treos distance per second.

We can note, that 6.8×10^{17} th quantum level of 'one full kinetic / unit gravitational coloumn' in second dimensional deformation matches with the 10^{4}th quantum level of gravitational coloumn of Sun as all shells in wave length of both waves will have 2.9625×10^{39} layers and equal kinetic energy of 8.7764439×10^{78} kinetons.

(2) By merger of $2 \times 0.9137975 \times 10^{38} - 1$ De Broglie's matters waves of $2 \times 0.9137975 \times 10^{38} - 1$ in 'full kinetic / unit gravitational coloumns' the wave formed at 10^{4}th quantum level in solar gravitational (coloumn) field can be named as 'planetary gravitational wave of Sun', which is

orbit of planet Mercury.

After merger of all such $2 \times 0.9137975 \times 10^{38} - 1$ ‘full kinetic / unit gravitational coloumns’ the wavelength moving in Mercury orbit placed in 10^{46}th layer of gravitational (field) coloumn of Sun will be $2 \times 0.3583722 \times 10^{46} - 1$ bound treos $[=(0.6263 \times 10^{4})^{2} \times (2 \times 0.9137975 \times 10^{38} - 1)]$.

By multiplication of this 2 × R C wavelength with π (3.14) we get the circumference of orbit in which planet Mercury revolve in one year.

These calculations can be taken as visible proof that $2 \times 0.9137975 \times 10^{38}$ ‘full kinetic /unit gravitational coloumns’ unite to form gravitational coloumn (field) of Sun (Sun is made up of 0.9137975×10^{38} unit masses) and at its 10^{4}th quantum level the planetary orbits are formed in solar system (D.4.11).

(A) 5.495×10^{83} free treos mass energy at this quantum level multiplied by 0.6263×10^{4} bound treos wavelength = $3.446.263 \times 10^{86}$ or S^{2} is kinetic energy of second dimension utilized by each matter wave.

(B) 10^{4} th quantum level of gravitational coloumn of Sun at the level of orbit of planet Mercury has 8.7764439×10^{78} kinetons × $(2 \times 0.3583722 \times 10^{46} - 1)$ total number of shells (in 2n–1 wavelength of wave in orbit of mercury) = $2 \times 3.145233887 \times 10^{124}$ (2 MG mass of Sun)]

[This second dimensional deformation and gravitational field of Sun is Schwarzschild matrix described according to the ‘general theory of relativity’.]

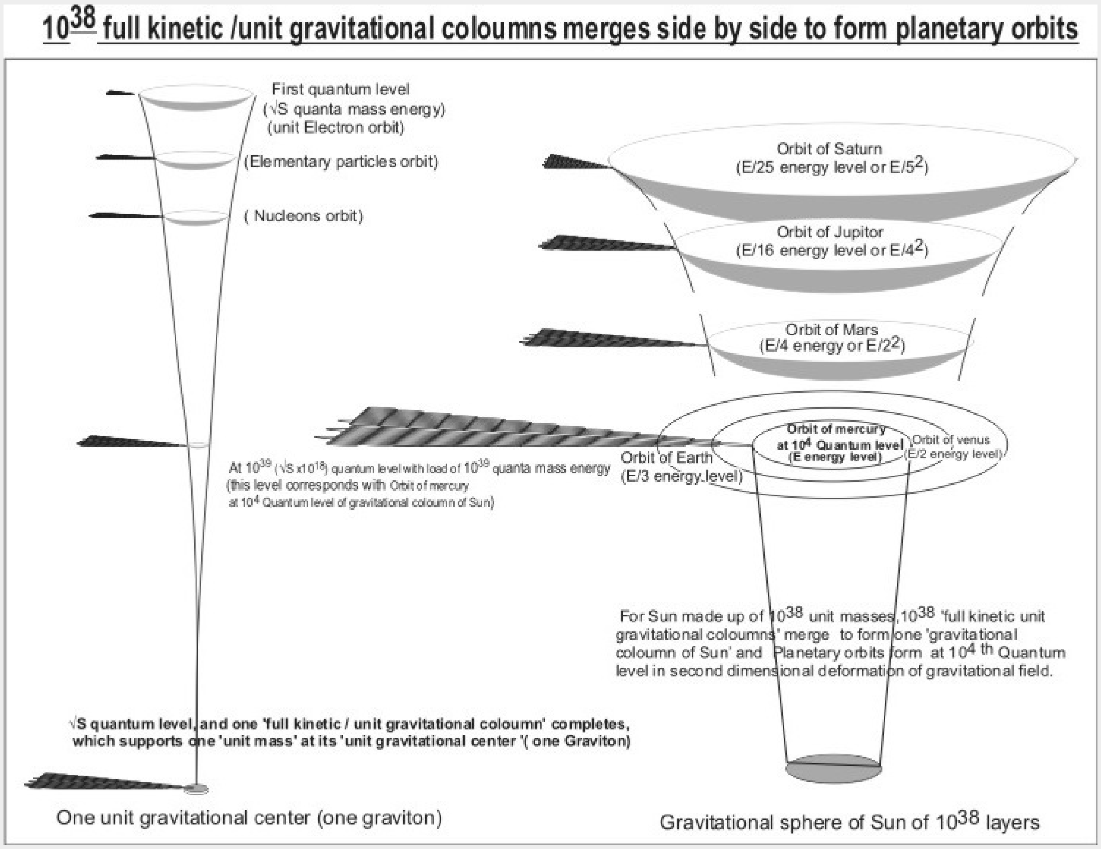

10^{38} full kinetic /unit gravitational coloumns merges side by side to form planetary orbits
First quantum level
(√S quanta mass energy)
(unit Electron orbit)
(Elementary particles orbit)
(Nucleons orbit)
Orbit of Saturn
(E/25 energy level or E/5^2)
Orbit of Jupitor
(E/16 energy level or E/4^2)
Orbit of Mars
(E/4 energy or E/2^2)
At 10^{39} (√S x10^{18}) quantum level with load of 10^{39} quanta mass energy
(this level corresponds with Orbit of mercury
at 10^4 Quantum level of gravitational coloumn of Sun)
Orbit of Earth
(E/3 energy level)
Orbit of mercury
at 10^4 Quantum level
(E energy level)
Orbit of venus
(E/2 energy level)
For Sun made up of 10^{38} unit masses, 10^{38} 'full kinetic unit gravitational coloumns' merge to form one 'gravitational coloumn of Sun' and Planetary orbits form at 10^4 th Quantum level in second dimensional deformation of gravitational field.
√S quantum level, and one 'full kinetic / unit gravitational coloumn' completes, which supports one 'unit mass' at its 'unit gravitational center '(one Graviton)
One unit gravitational center (one graviton)
Gravitational sphere of Sun of 10^{38} layers

Diagram 4.11 : 10^{39} Quantum Level and Planetary Orbits

This corresponds with the 10^{17} quantum level of ‘one full kinetic/ unit gravitational coloumn’ in second dimensional deformation of space-matrix [where quantum mechanics is applicable.] This is how the quantum mechanics is related with Schwarzschild matrix of ‘general theory of relativity’ and is the proof of this proposed ‘quantum gravitation’ model.

Orbital Speed of Planet Earth in Gravitational Field of Sun

All planets of Sun are situated in ten quantum levels between 10^4th and 10^5th quantum level in two dimensional deformation of gravitational coloumn of sun.

At 10^4 th quantum level of Sun, at the level of orbit of planet Earth the wavelength is 10^4 bound treos and is equal to total number of shells ($10^4 = S/10^{39}$), while its frequency is 10^{39} which is equal to number of layers in its each shell.

At 10^{46}th layer in gravitational coloumn of Sun at the orbit of planet Earth, the released kinetic energy (v^2) of 10^{78} kinetons, present in each sub kinetic coloumn(which are made up of 10^{39} layers or v number of layers), propels the 'point mass of Earth' by 10^{39} bound treo distance, or v bound treos distance, or 29.78444493 km per second.

By 10^4 vibrations of 10^4 shells in its wavelength the 'point mass' of Earth rotates once and after each rotation it is pushed to next bound treo, this process is repeated 10^{39} times in one second (10^{43} vibrations in one second). Thus the point mass of Earth is pushed by 10^{39} bound treos distance per second in its orbit (frequency of wave in orbit). Thus point mass of planet Earth (at its gravitational center) rotates 10^{39} times in one second and revolves in its orbit by 10^{39} bound treo distance ($\approx$ 30 km) per second.

In the gravitational coloumn of Sun with increasing distance and reducing kinetic energy, speed of orbital motion is reduced from the speed of light,i.e.10^{43} bound treo distance in one second in 10^{38}th layer (at the periphery of gravitational Schwarzschild sphere of Sun) to 10^{42} bound treo distance in one second in 10^{40}th layer

10^{41} bound treo distance in one second in 10^{42}nd layer,

10^{40} bound treo distance in one second in 10^{44}th layer and

10^{39} bound treo distance per second in 10^{46}th layers in gravitational coloumn of sun, in which the planet Earth & other planets are placed.

Size of Orbit of Planet Earth

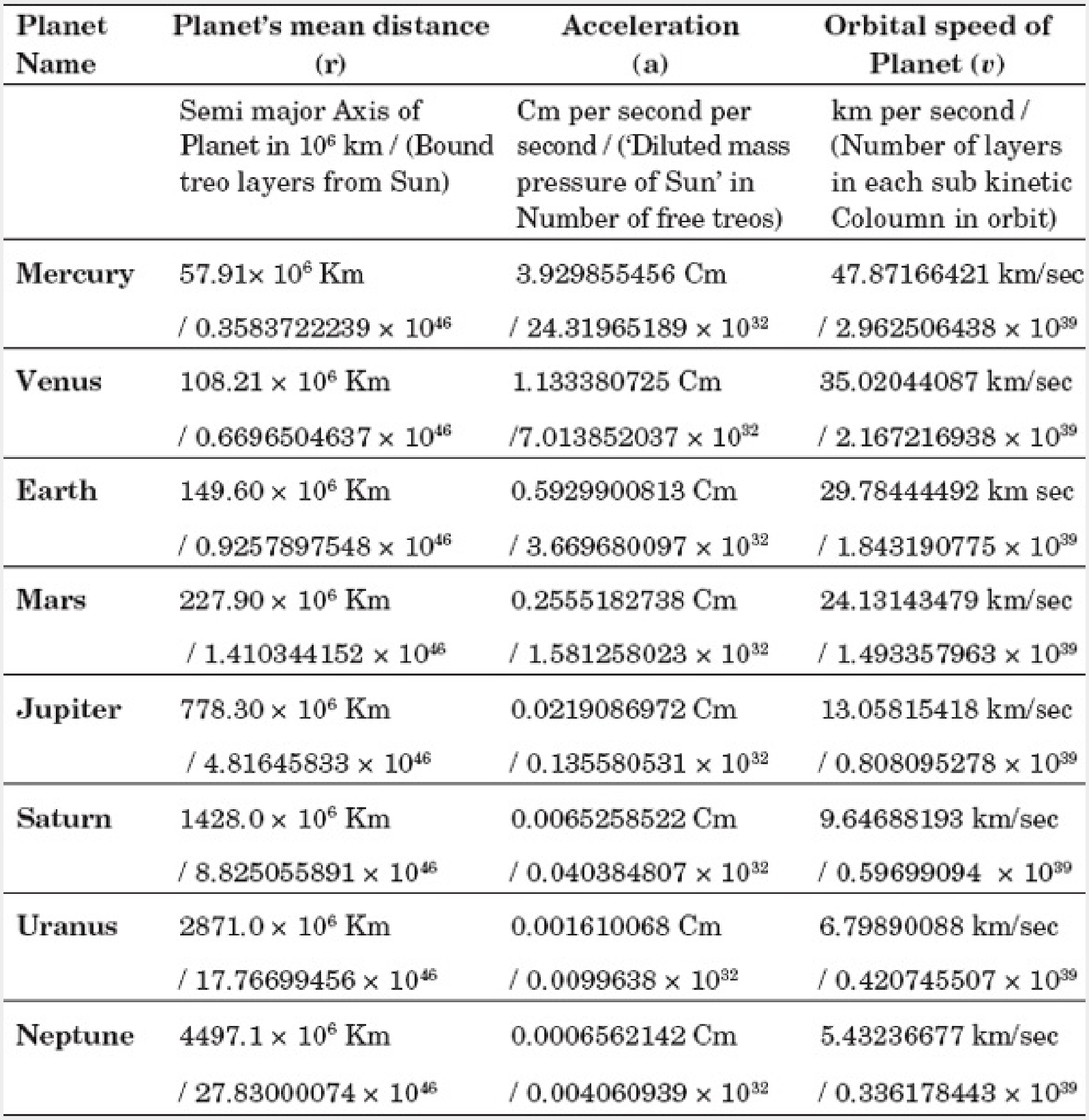
(A) The wavelength of wave revolving Earth in its orbit is of $2 \times 0.9258638622 \times 10^{46} - 1$ bound treos, at (r) $0.9258638622 \times 10^{46}$ bound treo layers distance from sun (as 2n–1 in n^{th} layer or 2r in r layered coloumn). In 10^{46}th layer of gravitational coloumn of Sun (at radius ‘r’) the wave will move in a near circular orbit having circumference 2 ‘r’ × π. This forms the orbit of Planet Earth made up of 5.8197156×10^{46} bound treos.[$2\ (0.9258638622 \times 10^{46}$ bound treos–1) × 3.14159265 (π) = $5.8173 - 10^{46}$ bound treos]

(B) Or $1.84389778 \times 10^{39}$ bound treo distance per second is orbital speed of Earth when multiplied by 31557600 seconds in one year it is equal to 5.8188989×10^{46} bound treo distance, the distance planet Earth moves in its orbit in one year. In one year the Earth’s gravitational wave moves up (north) and then moves down (south) while moving on all of its wave lets (shells) placed vertically in its one wavelength, and will move the ‘point mass of Earth’, up and down, and thus the Earth moving in its orbit crosses the equinox twice while revolving in a wave motion pattern in one year, which is responsible for seasons on Earth.

The layers in any one shell (frequency of wave) decides the Orbital speed (v) of planets

Planet Mercury revolves at v bound treo distance per second in its orbit due to the kinetic energy E_m (which is $v^2 = 8.7764439 \times 10^{78}$ kinetons in each shell) present in each shell in its orbit.

The orbital speed v of Mercury = $\sqrt{E_m} = \sqrt{v^2}$ 'bound treo distance per second' and is equal to the ' v number of layers' in each 'shell' present in wavelength of its orbit.



Planet Name	Planet's mean distance (r)	Acceleration (a)	Orbital speed of Planet (v)
	Semi major Axis of Planet in 10^6 km / (Bound treo layers from Sun)	Cm per second per second / ('Diluted mass pressure of Sun' in Number of free treos)	km per second / (Number of layers in each sub kinetic Coloumn in orbit)
Mercury	57.91×10^6 Km / $0.3583722239 \times 10^{46}$	3.929855456 Cm / $24.31965189 \times 10^{32}$	47.87166421 km/sec / $2.962506438 \times 10^{39}$
Venus	108.21×10^6 Km / $0.6696504637 \times 10^{46}$	1.133380725 Cm /$7.013852037 \times 10^{32}$	35.02044087 km/sec / $2.167216938 \times 10^{39}$
Earth	149.60×10^6 Km / $0.9257897548 \times 10^{46}$	0.5929900813 Cm / $3.669680097 \times 10^{32}$	29.78444492 km sec / $1.843190775 \times 10^{39}$
Mars	227.90×10^6 Km / $1.410344152 \times 10^{46}$	0.2555182738 Cm / $1.581258023 \times 10^{32}$	24.13143479 km/sec / $1.493357963 \times 10^{39}$
Jupiter	778.30×10^6 Km / $4.81645833 \times 10^{46}$	0.0219086972 Cm / $0.135580531 \times 10^{32}$	13.05815418 km/sec / $0.808095278 \times 10^{39}$
Saturn	1428.0×10^6 Km / $8.825055891 \times 10^{46}$	0.0065258522 Cm / $0.040384807 \times 10^{32}$	9.64688193 km/sec / $0.59699094 \times 10^{39}$
Uranus	2871.0×10^6 Km / $17.76699456 \times 10^{46}$	0.001610068 Cm / 0.0099638×10^{32}	6.79890088 km/sec / $0.420745507 \times 10^{39}$
Neptune	4497.1×10^6 Km / $27.83000074 \times 10^{46}$	0.0006562142 Cm / $0.004060939 \times 10^{32}$	5.43236677 km/sec / $0.336178443 \times 10^{39}$

TABLE 6 : **CONVERSION IN NUMBER OF BOUND TREO'S DISTANCE**

As the gravitational field strength fades by square of distance and the motion of a baby body in this gravitational field of parent body will form an ellipse (elliptical orbit)[2] other planets move in their respective orbits, at following speed.

$\sqrt{E_m}$ /2 ‘bound treo distance per second’ for Planet Venus,

$\sqrt{E_m}$ /3 ‘bound treo distance per second’ for Planet Earth,

$\sqrt{E_m}$ /4 (E / 2^2) ‘bound treo distance per second’ for Planet Mars,

$\sqrt{E_m}$ /9 (E / 3^2) ‘bound treo distance per second’ for Asteroid belt,

$\sqrt{E_m}$ /16 (E / 4^2) ‘bound treo distance per second’ for Jupiter,

$\sqrt{E_m}$ /25 (E / 5^2) ‘bound treo distance per second’ for Saturn,

$\sqrt{E_m}$ /49 (E / 7^2) ‘bound treo distance per second’ for Uranus,

$\sqrt{E_m}$ /81 (E / 9^2) ‘bound treo distance per second’ for Neptune,

and $\sqrt{E_m}$ /100 (E / 10^2) ‘bound treo distance per second’ for Pluto.

Biggest Planet of Our Solar System Broke Down

At 9 times the distance of first planet (first satellite) from parent body lies the biggest baby body in the gravitational field of any cosmic body, The orbit at this distance from parent body correspond to its third energy level which harbors E/9 (E/ 3^2) energy (where E is energy in the orbit of first baby body).

It can be noted that all four 'outer planets' i.e. Jupiter, Saturn, Uranus and Neptune have their biggest satellites at this third satellite energy level E/9 (E/ 3^2), while in solar system this third planetary energy level E_m/9 (E_m/ 3^2) harbors 'asteroid belts' (D.4.12).

Jupiter : has its biggest satellite Ganymede of 5262 km diameter in the orbit at third energy level,

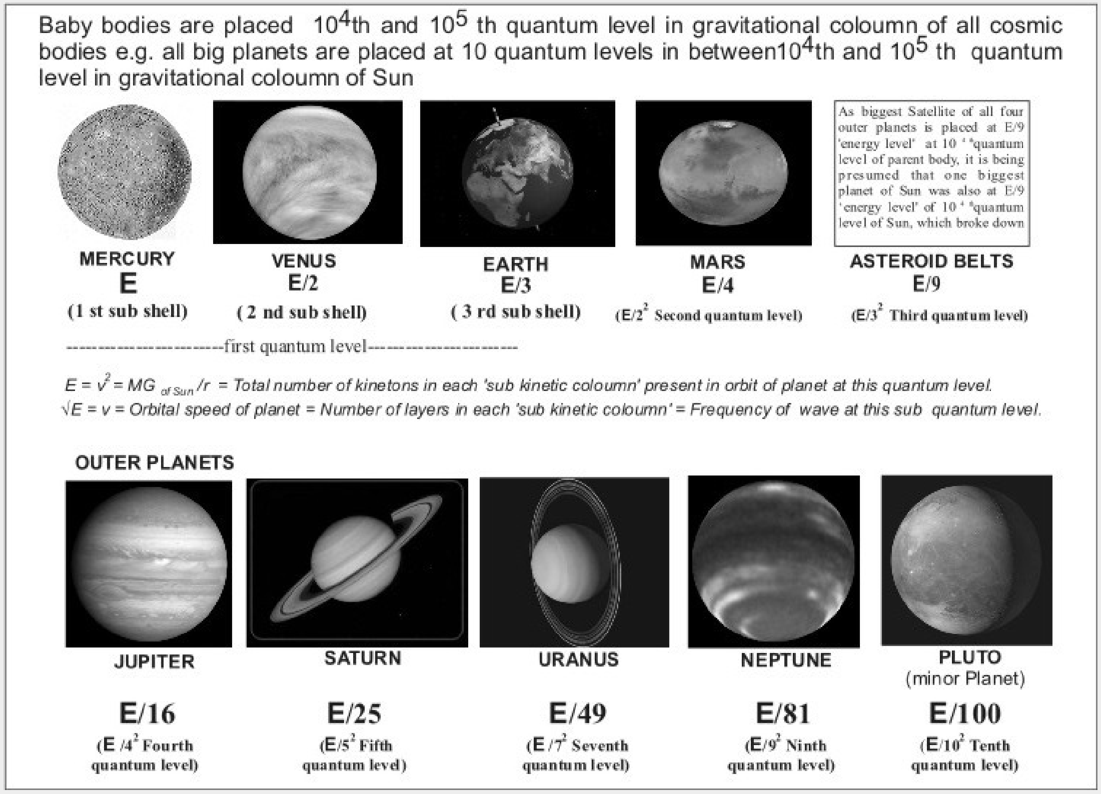
Saturn : has its biggest satellite Titan, of 5780 km diameter in the orbit at third energy level,

Uranus: has its biggest satellite Titania, of 1578 km diameter in the orbit at third energy level, and

Neptune: has its biggest satellite Triton 2706 km diameter in the orbit at third energy level (at 9 times the distance between Neptune and its first satellite).

So we can infer that this level E/9 (E/3^2) in any gravitational field will normally harbor its biggest baby body. With this logic it can be presumed that our solar system also had its biggest Planet (also named as Megaskar) at E_m/9 (E_m/3^2) energy level, but on this level now lies the 'asteroid belt'. The asteroids could be the pieces of broken biggest planet of our solar system.

The uneven density of the body of moon indicates that these broken pieces also contributed to most of the mass of our moon. [3]



Baby bodies are placed 10^4th and 10^5 th quantum level in gravitational coloumn of all cosmic bodies e.g. all big planets are placed at 10 quantum levels in between10^4th and 10^5 th quantum level in gravitational coloumn of Sun

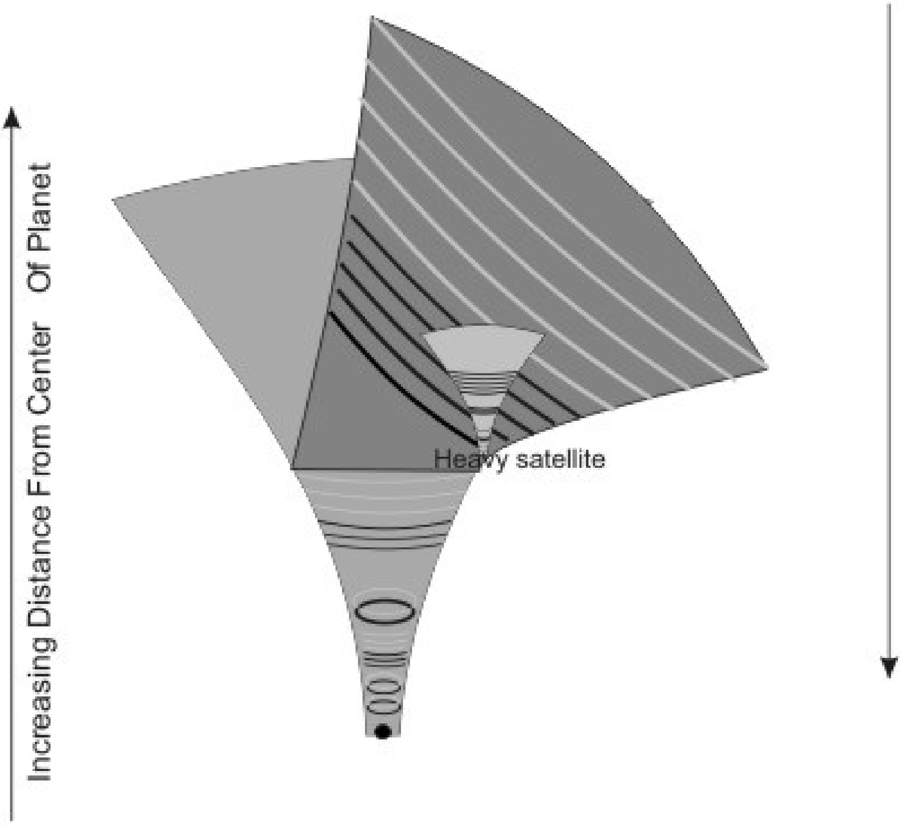
As biggest Satellite of all four outer planets is placed at E/9 'energy level' at 10^4 th quantum level of parent body, it is being presumed that one biggest planet of Sun was also at E/9 'energy level' of 10^4 th quantum level of Sun, which broke down

$E = v^2 = MG_{of\ Sun}/r$ = Total number of kinetons in each 'sub kinetic coloumn' present in orbit of planet at this quantum level.

$\sqrt{E} = v$ = Orbital speed of planet = Number of layers in each 'sub kinetic coloumn' = Frequency of wave at this sub quantum level.

MERCURY
E
(1 st sub shell)
VENUS
E/2
(2 nd sub shell)
EARTH
E/3
(3 rd sub shell)
MARS
E/4
(E/2² Second quantum level)
ASTEROID BELTS
E/9
(E/3² Third quantum level)
------------------------first quantum level------------------------
OUTER PLANETS
JUPITER
E/16
(E /4² Fourth quantum level)
SATURN
E/25
(E/5² Fifth quantum level)
URANUS
E/49
(E /7² Seventh quantum level)
NEPTUNE
E/81
(E/9² Ninth quantum level)
PLUTO
(minor Planet)
E/100
(E/10² Tenth quantum level)

Diagram 4.12 : Planets and energy level of their orbits



The inclination (angle)of orbits of Distal satellite increases after the presence of a heavy satellite which tilts 'parent gravitational coloumn of outer planet'

4.13 : Tilt of Orbits

Tilting of Gravitational Coloumn of Parent cosmic body, by Heavy Baby body

The gravitational coloumn of parent body tilts according to magnitude of gravitational deformation produced by any ‘heavy baby satellite’. This can be verified by tilted inclination angel of orbits of distal baby satellites, immediately after presence of a heavy satellite in gravitational field of parent planet (A phenomenon observed in case of all four outer planets)’. This is visible proof of formation of gravitational coloumn in second dimensional deformation of gravitational field of any cosmic body.

Effects on Planet Earth by its own Gravitational Wave

CORIOLIS FORCES - We have studied the division of trough and crest of one EM wave of Gamma photon packet, which produces clock wise and anti clock wise motion of its two halves , and thus it produces electron and positron.

Similarly the angular momentum of wave rotating planet Earth, is divided on two sides of its equator . Due to bifurcation of wave, the rotating mass of Earth in its atmosphere and hydrosphere produces the ‘Coriolis forces’ on two sides of its equatorial line (and along with simultaneous rotation of Earth itself , it produces ocean currents). Thus all rivers flowing in northern hemisphere exert their force ‘west ward’ while rivers in southern hemisphere exert their force ‘east ward’ and this decides the direction of erosion of its banks produced by river. *Traditionally the Coriolis force is considered to be produced due to reducing speed of rotation of Earth when measured from equator to poles.*

ROTATION OF GRAVITATIONAL FIELD OF EARTH - The Earth surface rotates at equator by less then ½ km per second (or 1680 km per hour) and completes one full rotation of Earth in one day (It is the resultant rotation of point mass of Earth at its gravitational center, and as the entire layers in the body of earth are moving at different speeds, they translate this rotational speed of 1680 km per hour at the surface of earth).

The gravitational kinetic energy of Earth, in its gravitational field gradually increases per bound treo layer towards its gravitational center placed in gravitational sphere of earth. It support (10^{32} unit masses)^2 total load of Earth at its gravitational center and 2MG in each layer (or total 2×10^{118} kinetons are in all shells in 2n–1 wave length of any n th layer) of its gravitational coloumn. This 2 MG is calculated as 2 × (10^{32} unit masses in Earth × proposed value of universal gravitational constant or $3.441937353 \times 10^{86}$ kinetons per unit mass per second per second.)

This enormous gravitational kinetic energy of Earth increasing towards its gravitational center, along with rotations of all rotating layers of space-matrix with the rotating mass of Earth is responsible for geothermal energy (heat of planet), molten state of earth's interior, and movement of tectonic plates which in turn is responsible for Earth quakes, volcanic eruptions and tsunamis.

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1. We are preparing medicines in space; we can even use the world of condensed space-matrix in under sea area, especially for storage of food grains in sea depth at its floor and in bunkers.

2. The answer of this question of Mr Haley (the astronomer who predicted 76 year cycle of Haley's commit but died before his prediction proved right) was solved mathematically by Sir Newton who calculated it for the first time in seventeenth century.

3. Is it possible that unicellular life on Earth suddenly changed in multi-cellular life at the time of this catastrophy, was in fact seeded from this broken planet on Earth?

STRUCTURE OF THE UNIVERSE

This chapter will explain

Why is it a flat universe as if galaxies are painted on the surface of an expanding balloon?

Why and how matter is distributed uniformly in universe?

What is probable life span and size of universe?

What causes aging of universe and of every living creature?

When and how universe was born and how will it die?

Are there parallel universes, if yes, what separates these universes from us?

How signal is transmitted instantly in universe?

What is ‘relativity of Space’; and are the intergalactic journeys possible?

Light takes fixed time to travel fixed distances. When visualizing through telescope at great distances in fact, we are observing events which happened in the past (may be millions or billions of years back) as its information reaches us after a time gap; which is time taken by light to travel this distance’. But we can not be sure of the place of this incidence as photon carrying this information moves in deformed space on curved paths.

FLAT UNIVERSE - All galaxies are placed at one fixed quantum level in deformation of Space-matrix of one unit universe, which is seen as ‘Flat Universe’ or one bran of Multivera (multiple universes)

It has been observed that in our universe all the galaxies are placed, as if they were painted on the surface of an expanding balloon in which space-time implodes inwards. It was already observed“ that not only the properties of space are determined by the matter it contains, but vice-versa the space determines the properties of matter”.

Space-matrix (and its deformation by big cosmic bodies), plays a role not only in positioning of planets, satellites and stars but it also decides the configuration of planets as its density and ‘state of their matter’ is determined by the magnitude of deformation of local space-matrix. Take the example of our solar system, all planets condenses and are placed more or less in one plane, of ‘Solar gravitational coloumn (gravitational field)’, at ten energy levels of its 10^4th quantum level (and outer solar system at 10^5th quantum level). Thus the inner planets are solids, while the big bodies of Jupiter and Saturn in solar system are gaseous giants.

Similarly ‘all galaxies of our universe are placed at a definite quantum level in one plane (just like placement of carbon atoms in a bucky ball which forms the strongest possible architectural configuration), in a constant ‘two dimensional deformation of space-matrix’ of our unit universe; and gives an impression that all galaxies are placed only on flat outer surface of (our balloon like) deformed space-matrix of universe or in one bran of Multivera (multiple universes in which each bran is regulated by its own cosmic rhythm.)

Matter is uniformly distributed in the Universe

Galaxies are uniformly distributed in whole universe, due to the fixed tensile strength of space-matrix and evenly separated by identical supporting kinetic coloumns.

(1) *Here we can recall the Avogadro's Principle* [1] *"two equal volumes of gases of any type, if kept at the same pressure and temperature, will contain identical number of molecules."*

After neutralization of their individual mass pressures, all types of gas molecules (light or heavy) are converted into 'point masses' and are distributed evenly according to the 'tensile field strength of space-matrix'.

(2) *One molar mass of all types of gases occupy 22.4 liter in volume at STP.*

All equal layered kinetic coloumns (of more or less of equal size at same quantum level, which support all gas molecules) support the equal number of all type of gas molecules in a given space, so they are distributed uniformly and occupies fixed identical space.

(3) We have earlier noted that space-matrix spreads different increasing 'loads' of 'any packet of mass-energy' evenly on all apex bound treos in

its Reduced Compton wavelengths, due to the fixed tensile strength of space-matrix.

The field strength or the tensile strength of space-matrix in one meter is of the order of 'Planck's force' or 1.21027 × 10^{44} Newton. (Details)

Gravitational singularity and Universal singularity

All matter of universe did not collapse at one point (of Planck's least length) in the beginning of Universe which is called 'universal Singularity (according to General theory of relativity) but according to this treo model, condensation of energy / mass at universal singularity can be compared with proposed 'gravitational singularity' in black hole .

The general theory of relativity describes that at the beginning of universe all matter was contracted at one point of Planck's least length named as 'universal singularity'.

In the treo model it is proposed, that entire mass (energy) of our universe was never constricted on a point of one Planck's least length (the so called 'singularity') thus sudden rapid exponential expansion of universe just after the 'big bang' was never required. This concept came in to existence due to different understanding of the meaning of 'singularity' as proposed by general relativity.

We should consider 'singularity of universe' some what like gravitational singularity at 'gravitational center of a body' at the center of its ‘gravitational sphere’. The gravitational sphere of unit black hole support mass-energy of ‘S’ unit masses (S^3 free treos which get totally accommodated in its gravitational sphere) which exert a load of S^2 unit masses at its gravitational center and is supported by S^2 ‘unit gravitational centers’ (Gravitons) distributed in ‘S’ layers of gravitational sphere, which direct all their vectors towards its center i.e. at ‘gravitational center of body’; which can be labeled as ‘gravitational singularity’.

This is inferred that at the time of ‘big crunch’ the ‘universe was of substantial size’ (it was not a pin point universe); and the ‘singularity of universe’ can be viewed in the light of ‘Gravitational singularity of a cosmic body’ as described above [2]. Then this treo model hypothesis also eliminates the need of ‘exponent sudden expansion of universe’ just after the big bang, as postulated in previous models of universe.

One dimensional pendulum can be a ‘Pendulum Clock’, two dimensional pendulum is ‘Elliptical Orbits’, three dimensional pendulum can be compared to a ‘Contracting and Expanding Ball’ and four dimensional deformation of space-matrix is our ‘Quantum Pendulum Universe’

It is a Pendulum Universe : The treo model unveils how our universe behaves as a pendulum?

What are one dimensional pendulums - We are familiar with the pendulum in our wall clocks. It is a ‘one dimensional pendulum’ in which its ‘kinetic energy’ (maximum when pendulum is vertical) fluctuates with ‘potential energy’ (maximum when pendulum is in near horizontal plane). This one dimensional Pendulum completes ‘one oscillation’ in its one swing.

Each EM wave is one dimensional pendulum of one quanta mass-energy. Each EM wave is formed by fluctuation (oscillation) of fifth dimension ‘the energy’ with time. (fluctuations of potential energy and kinetic energy in all bound treos which form sub kinetic coloumns) (D.3.8)

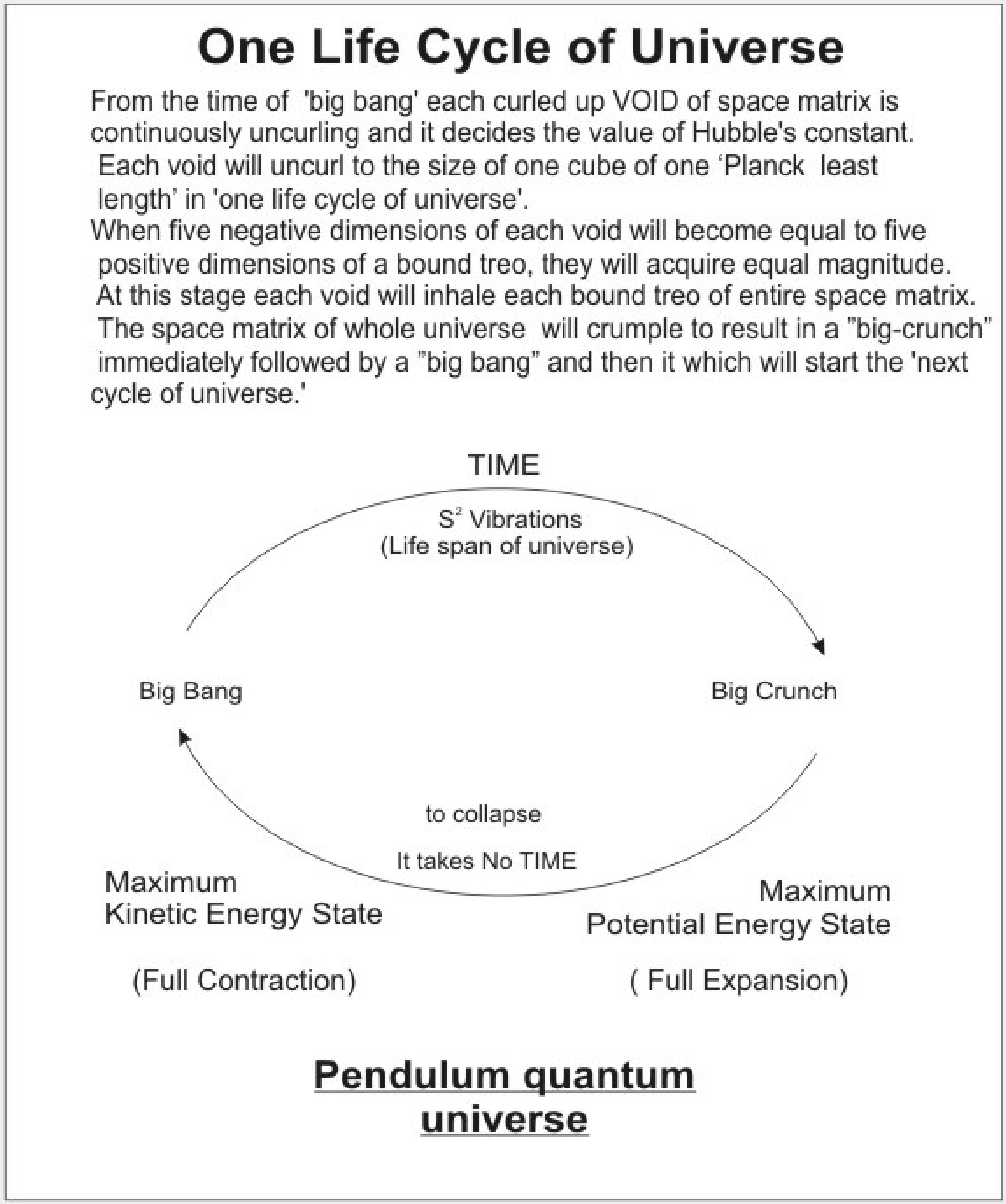
What are Two dimensional pendulums - All planets move in Elliptical orbits. Unlike circles which have one center, ellipses have two centers; one center is our Sun i.e. ‘kinetic energy center’, while other ‘potential energy center’ is ‘vacant foci’. The planet in its elliptical orbit completes its ‘one oscillation’ in ‘one planet year’. The ‘kinetic energy’ in orbit is maximum near Sun at aphelion where it moves at its maximum speed, while its ‘potential energy’ is maximum near ‘vacant foci’ at perihelion where it moves slow in its orbit. All orbits can be labeled as two dimensional pendulums or in other words a pendulum which is oscillating in two dimensions.

Our universe is a four dimensional pendulum, a contracting and expanding ball which completes its one oscillation in its whole one life span. In this universe its ‘total Kinetic energy’, (which was maximum when it was fully contracted at the time of its birth), is continuously decreasing with the proportionate increase in its ‘total potential energy’ by constant uncurling of all voids in space-matrix with each vibration or S times by S vibrations in one second. This total potential energy will become maximum after its full expansion, just before ‘big crunch’. This ball of universe will again contract fully to regain its maximum kinetic energy level with lowest potential energy by a sudden ‘Big bang’.

This pendulum universe completes its ‘one oscillation’ in ‘one life time of universe' i.e. in S^2 $(1.855394405 \times 10^{43})^2$ vibrations (D.5.1 : 'Life cycle of universe').

It is a 'Quantum Universe' :

S $(1.855394405 \times 10^{43})$ free treos constitutes one quanta energy (or a 'unit photon packet' i.e. 'hv_1'). This is the exact value of 'reduced Planck's constant' or 'ħ' and the angular momentum of this 'one quanta energy' is the value of *'h'* Planck's constant.



One Life Cycle of Universe

From the time of 'big bang' each curled up VOID of space matrix is continuously uncurling and it decides the value of Hubble's constant. Each void will uncurl to the size of one cube of one 'Planck least length' in 'one life cycle of universe'.

When five negative dimensions of each void will become equal to five positive dimensions of a bound treo, they will acquire equal magnitude. At this stage each void will inhale each bound treo of entire space matrix. The space matrix of whole universe will crumple to result in a "big-crunch" immediately followed by a "big bang" and then it which will start the 'next cycle of universe.'

Diagram 5.1 : Life Cycle of Universe

As it is a quantum universe; S bound treos in one line of one page (S energy), S such lines in one page (S^2 energy), S such pages in one book (S^3 energy) and such S books (S^4 energy) form gravitational sphere of one 'unit black hole' and one cube of S^2 bound treos is our 'one unit universe'.

With increasing mass-energy (in units of one quantum, one unit Electron mass, one unit mass and one electron black hole) at each of √S quantum levels in all four dimensions, the 'load' increases (1) From one free treo to S free treos, (2) From one quantum to S quanta, (3) From one unit mass to S unit masses (4) From one electron black hole to S electron black holes and deforms equal number of layers on unit space-matrix (matrices) equal to the total 'load' in quanta.

The kinetic coloumns of uniformly expanding universe form 'cosmic web' of universe by cosmic strings in which all galaxies are arranged at nodal points at one definite quantum level making it self supporting 'Flat universe'.

Big Bang and Big Crunch

All curled up voids by S^2 vibrations (life span of universe) will fully uncurl and after their full expansion they will annihilate adjacent bound treos to collapse the fabric of space-matrix (Big crunch); this will be immediately followed by new Big Bang

One 'life span of our universe' can be well understood by the following simile. The entire universe was like a fully crumpled small ball of paper (fully contracted and at maximum kinetic energy state) just after Big Bang (its birth) and by the time of Big Crunch (its death) it will constantly expand to become fully expanded to its maximum size (at maximum potential energy state) and will become flat sheet of paper without any wrinkles (deformations/contractions) on it.

Treos constituting the five positive dimensions [3] form all matter, while the voids constitute the five negative dimensions and are still curled up. A bound treo has got its existence only till the corresponding adjacent void constituting five negative dimensions is in curled up form. Our present structure of universe is maintained due to the fact that voids are still partially curled up and thus all matter is preserved (not annihilated).

During the life span of the universe all the voids will keep on uncurling themselves, at the rate of ‘present value of Planck’s least length’ / S^2 , per vibration. By S^2 (10^{86}) vibrations of universe in S number of seconds i.e. which is the life span of universe, the slowly uncurling all voids will finally attain the size of Planck’s least length, then the size of each void will be just equal to its neighboring bound treo (i.e. a cube of Planck’s least length) and the universe will be at its ‘maximum potential energy state’ and of maximum size.

Once the expansion stops due to full uncurling of all voids and value of ‘cosmological constant’ becomes zero a big crunch with the disintegration of all fabric of space-matrix will take place due to engulfing of all treos by adjoining voids then this ‘static ten dimensional universe’ will not be able to check its gravitational collapse and a ‘big bang’ will occur.

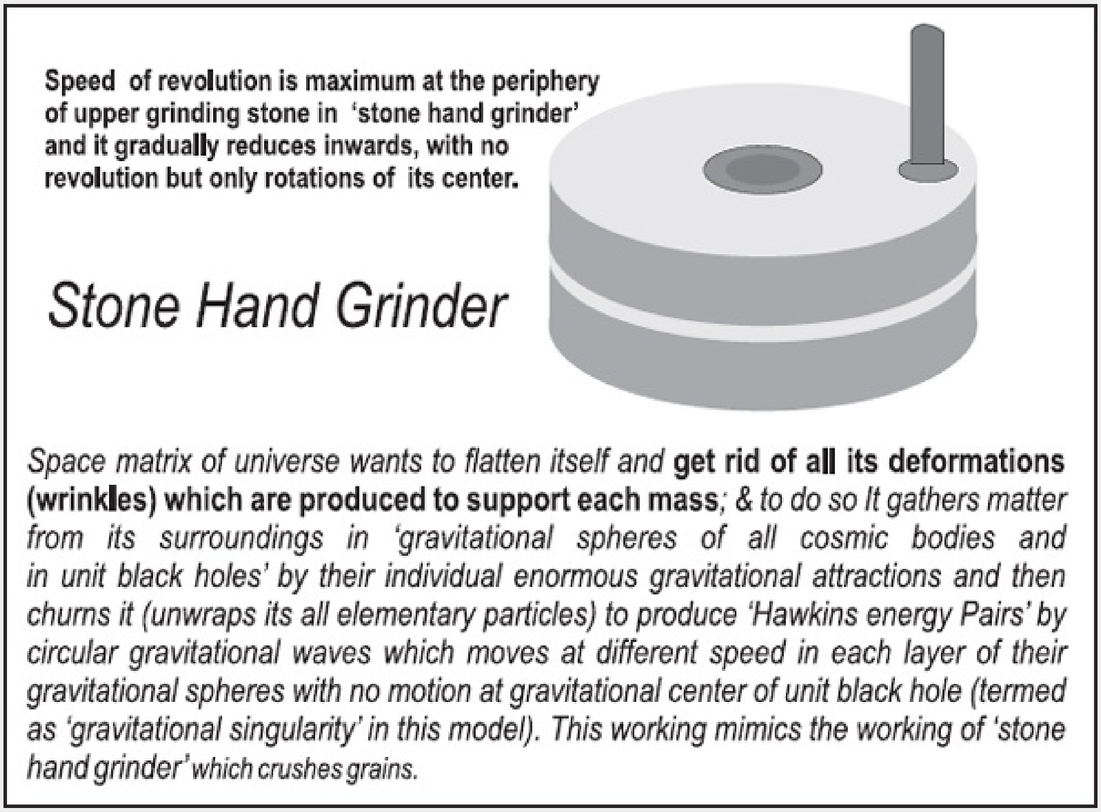
This ‘big bang’ which will bifurcate the so formed ‘unstable ten dimensional universe’ at its each point, will divide into five positive dimensional treos as energy particles and fully curled up five negative dimensional voids. Both will again weave the space-matrix of new baby universe by the alternate placement of treos and voids.

This fully contracted new baby universe will be at ‘maximum kinetic energy state’ which will again immediately start expanding at all points and the periphery of universe will swell at the speed of light to begin its new life span of S^2 vibrations. Thus it swings from a ‘maximum kinetic energy state’ to a ‘maximum potential energy state’ and vice-versa in one life cycle of universe and behaves as ‘pendulum quantum universe’.

Aging of Universe

Slow uncurling of curled up voids is responsible for uniform slow expansion of universe: It is cause of aging of universe and of all living creatures.

We should understand that by the expansion of universe the ‘kinetic energy of universe’ is constantly being converted into its ‘potential energy’ as a part of aging process of universe (and thus it increases the entropy of universe).



Speed of revolution is maximum at the periphery of upper grinding stone in 'stone hand grinder' and it gradually reduces inwards, with no revolution but only rotations of its center.

Space matrix of universe wants to flatten itself and **get rid of all its deformations (wrinkles) which are produced to support each mass**; *& to do so It gathers matter from its surroundings in 'gravitational spheres of all cosmic bodies and in unit black holes' by their individual enormous gravitational attractions and then churns it (unwraps its all elementary particles) to produce 'Hawkins energy Pairs' by circular gravitational waves which moves at different speed in each layer of their gravitational spheres with no motion at gravitational center of unit black hole (termed as 'gravitational singularity' in this model). This working mimics the working of 'stone hand grinder' which crushes grains.*

Diagram 5.2 : Black holes And Gravitational Spheres works as 'Stone hand grinders'

Aging universe, constantly tries to get rid of its entire complex deformations (which support different loads) and flatten out entire space-matrix [4].

The 'increasing potential energy' (increasing entropy of universe) is due to expansion (flattening of universe) by getting rid of all its deformations. This is made possible by removal of all its 'loads' by grinding of matter, in all gravitational spheres and in unit black holes.

The matter particles and Electrons were formed by the wrapping of space-matrix (kinetic coloumns) on the 'mass-energy packets' , when the angular momentum of matter wave was from 90° to 180° in the of second dimensional deformation. But the angular momentum of gravitational wave in gravitational sphere is from 270° to 360° (in the fourth dimensional deformation) which will unwrap these matter particles to generate Hawkin's radiation.

To flatten space-matrix, all surrounding mass is gathered in gravitational spheres by gravitational attraction and crushed by gravitational waves (forces) moving at different speeds in these gravitational spheres (or nature's 'hand grinders') (D.5.2 :Stone hand grinder). This is one purpose of gravitation to re-flatten space matrix by removing all its knots (deformations in all four dimensions by digesting matter.)

Unwrapping of the matter particles in gravitational spheres of cosmic bodies, produce pairs of 'free treos' and 'voids' (Hawking pairs of +ve and -ve energy). The production of Hawking's energy pairs is inversely proportional to the 'mass of black hole'.

Out of these Hawkin's energy pairs, all negative energy voids are retained by gravitational sphere but 'treos' flow outwards as out flowing energy. This out flowing energy will expel electrons as 'electron beams' from a black hole and this is also the energy behind the continuous outwards 'flow of solar wind'.

The solar wind sweeps the debris of nuclear disintegration produced by gravitational waves in smaller gravitational sphere of cosmic body, in to the surrounding space. Thus in case of Sun they move plasma from Sun towards Earth to produce electro magnetic storms . Sun spots are 'cyclonic three dimensional deformations' on the surface of gaseous body of Sun.

Concepts of Theory of Relativity can be explained by the Proposed Treo Model

As any signal or a photon packet can be pushed by one vibration to a minimum distance of ‘one Planck’s least length’ and it requires at least ‘one Planck’s least time’, so it produces a relativity of motion which depends on the position of ‘event’ and the position of ‘observer’. A minimum time is always required by the light to travel a given distance, so the events are observed, relative to the position of observer according to the distance involved between these two, thus the concept of relativity comes in picture.

(1) The speed of light is fixed, as it is based on two fixed parameters (two universal constants of ‘Planck’s least length’ and ‘Planck’s least time’), and thus speed of light is a universal constant. Photon packet is pushed by ‘Planck’s least length’ (i.e. from one bound treo to next bound treo) in ‘Planck’s least time’; thus it moves at speed of light ≈ 300,000 km per second or S bound treos distance per second.

(2) Mass of fast moving bodies (mass of its nucleons and electrons) increases because there is increase in number of layers of all sub kinetic coloumns in their wavelength with increasing speed and momentum. These additional kinetons in rotating kinetic coloumns are included in ‘composite mass-energy of all elementary particles’ of any moving body. [5]

The momentum of body increases by transfer of integral number of layers (2n–1 kinetons in n th layer) from all kinetic coloumns of the pushing body to the pushed body (transfer of kinetic energy). With increased number of kinetons in all sub kinetic coloumns of all electrons and nucleons of pushed body (these kinetons are dragged by the particle according to Higgs mechanism) in fast moving particle, will increase composite mass of particle or a body

(3) ‘Slow down of time for a fast moving body’ is due to local reduction in the number of vibrations per second of deformed bound treos. (which

in turn will increase time gap between two successive vibrations or ‘Planck’s least time’ in deformed space).

With increasing deformation of space-matrix (it is already known that time slows down with increasing gravitational strength of field) the number of vibrations per second, of all deformed bound treos will slow down in local area and this in turn will increase the time needed for a change ‘least processing time’, (the minimum time needed for a change in universe’) and now every reaction will take more time and every process will slow down in local area of space-matrix (this represents ‘slow down of time’ for any fast moving body.)

(4) Contraction of fast moving body in length. The fast moving body will contract in length, due to reduced wavelength (or length) of all its constituent electron & nucleon packets (with their increased mass/momentum).[6]

The orbits of all these ‘Nucleons’ and ‘Electrons’ with increasing mass and their decreasing wavelength, will shrink as it shifts at higher quantum levels in depth, with increased angular momentum. It will now form smaller ‘elliptical orbits’ in ‘whirlpool like second dimensional deformation of space-matrix .

Size of Our Universe - Four Possibilities

Every parameter and observation indicates that the radius of our future undeformed and fully expanded universe will be of S^2 bound treo length. But is it a universe with a definite boundary or this S^2 bound treos radius can be of ‘one unit universe’ which effects us, out of one infinite universe (energy pool).

One : All ‘universal constants’ (recalculated value of gravitational constant, speed of light, Hubble constant, unit mass etc) and the size of ‘one unit space-matrix’ indicate towards the total size of our universe. Each matter wave consumes S^2 ground energy (mass energy in free treos × wave length of matter wave) of second dimensional deformation. All these observations indirectly imply that the maximum radius which the universe can attain after its full expansion should be equal to S^2 bound treos distance.

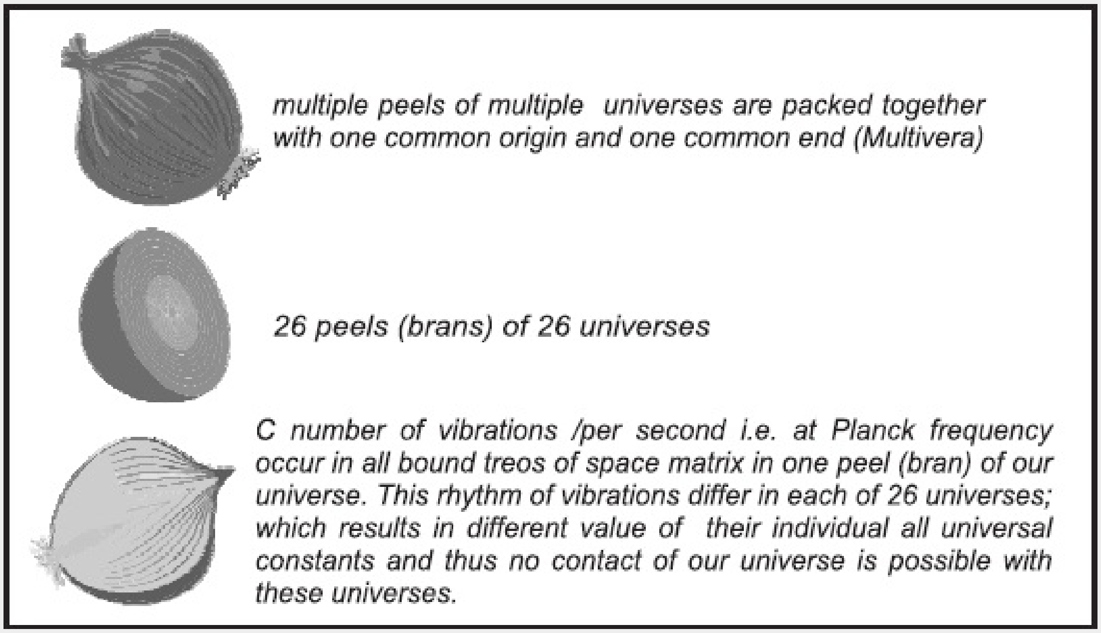
Secondly; one universal constants, describing the expansion of universe (Hubble’s expansion) also dictates that its outer most layer of present universe (periphery or ‘event horizon’ of present universe) is moving outwards at the speed of light, and it can expand till S seconds (life span of universe) up to S^2 bound treo distance, as radius of fully expanded (future) universe.

But even if, an infinite universe exists beyond our expanding ‘one unit universe’, it has to be a ‘lost universe’. Because if any signal originates there and travels at the maximum possible speed (i.e. speed of light) towards us, it can not cross the periphery of our universe as it is also expanding at the ‘speed of light’ and will thus block the entry of any such external signal (which will constantly hover in this region only).

The periphery of our universe is the ‘event horizon of our universe’. It can be compared with the ‘event horizon of a black hole’. By definition ‘black hole’ is a ‘set of events’ from where it is not possible to escape. It means that the boundary of the black hole, its event horizon, is formed by rays of light which fail to get away from black hole.

Thus it is expected that, the light ray running away from universe will not be able to get away from our expanding universe, as boundary of our universe is managing to keep one step ahead Thus all information with light rays will hover in this area only. All photons (and all information) will rotate with the rotating periphery of universe at the’ speed of light’, which will be the boundary of this unit universe.

Two : It is also possible that our universe with pre assigned maximum size of S^2 Planck's least length radius, (is now inflated up to its present size of 10^{62} Planck's least length radius or 13.7 billion light years), is a bubble (among many others) inside a more or less infinite universes. This bubble keeps on oscillating (expending and contracting) in a 'cyclic manner' every time after S number of seconds from Big Bang to Big Crunch, without bursting.



multiple peels of multiple universes are packed together with one common origin and one common end (Multivera)

26 peels (brans) of 26 universes

C number of vibrations /per second i.e. at Planck frequency occur in all bound treos of space matrix in one peel (bran) of our universe. This rhythm of vibrations differ in each of 26 universes; which results in different value of their individual all universal constants and thus no contact of our universe is possible with these universes.

Diagram 5.3 : Onion peel model of Multiverses

Three : As every body see his own 'rain bow', similarly every body can be at the center of his 'own personal individual universe' in an infinite pool of energy. This can be visualized as separate 'individual aura of S^2 bound treo radius' which acts to produce energy to move all matter waves, provide energy to graviton etc. and effects every one individually. Thus it is their own personal universe.

Four : Parallel universes or multiple universes are possible[7] (i.e. Multivera), where each universe is made up of one membrane or 'bran' and can be visualized as peels of an onion (each universe is at one fixed but different Quantum level in five dimensional deformation of multivera) with one common start and one common end, but divided in peels (brans or quantum levels with different universal constants) with their different rates of vibrations at different individual Cosmic rhythms and give different values to all personal universal constants (D.5.3 : Onion peel-structure of multivera)

Our flat universe (as we and all galaxies are on surface of an expanding balloon) and 10 or 26 dimensional universes, which M string theory predicts support this favored onion peel model.

Parameters Indicating Size and Life Span of Our Universe

The following parameters when taken jointly into consideration, indicates the size (of S^2 bound treo radius) and life span (S^2 vibrations or S number of seconds) of our universe.

(1) Planck's frequency i.e. S vibrations per second is fixed rhythm of universe which carves our whole universe. These vibrations at each point can only be generated by one fixed size of S^2 bound treo radius universe.

(2) All universal constants have their values based on this S number; and vice-versa this S number should determine the size and life span of universe.

(3) Ground energy in each dimension; 'one kineton' ground energy in

first dimension, S kinetons or ‘one quantum’ ground energy in second dimension, S^2 kinetons or ‘one graviton’ ground energy in third dimension and S^3 kinetons or ‘one electron black hole’ ground energy in fourth dimension, all indicate one fixed energy of universe.

All matter of universe is made up of Electrons and Nucleons which revolve by their own individual ‘matter waves’. These matter waves always consumes S^2 number of kinetons in second dimensional deformation of ‘one unit space-matrix’.

(4) One ‘graviton’ supports maximum load of one unit mass and it can decide the value of ‘proposed gravitational constant’.

S^2 free treos (one unit mass) is the maximum ‘load’ which can be supported by space-matrix at any point in the universe at ‘one unit gravitational center’ (one graviton). The kinetic energy of one ‘full kinetic / unit gravitational coloumn’ made up of S^2 bound treos supports this ‘load’; this supporting energy should spread on S^2 number of undeformed bound treos in one line (which should be the radius of one unit universe).

(5) According to treo model - omnipresent uniform expansion of our universe is occurring due to uncurling of all voids simultaneously and it decides the value of Hubble constant.

Conventionally Hubble’s law states that $v = H_0 \times D$

Apart from universal expansion these voids decides,

Hubble’s Time $1 / H_0 = 1 / (1 / S^2)$ per vibration = S^2 vibrations; which is the total life span of universe from ‘big bang’ up to the time of ‘big crunch’. At this imaginary time the length of fully uncurled void will be same as the length of a treo, which is one Planck least length.

Hubble’s length $1 / H_0 \times c = D_u = S^2$ Planck’s least lengths.

(6) A simple question now arises, that if 'one unit space-matrix' made up of 'S^3 bound treos', self supports the 'load' of 'S^3 free treos' by deformation in all three dimensions of space, (no matter at which point in the universe this 'load' is exerted), then why can't the size of the 'universe' be governed / determined by its own 'load', which has to be supported by itself.

(7) There is one indirect support to this hypothesis of 'personal individual universe', that the CBM (cosmic background radiation mapping) of the entire universe is uniform and equal in all directions as measured by Planck's telescope (which was announced in July 2010), as if our Planck's telescope was at the center of the universe. Actually this mapping of the CBM of universe by Planck's telescope is similar to the mapping of individual aura (individual's effective energy boundary) which should be the size of our effective 'individual personal universe'.

At this point I would like to quote a quotation from the ancient epic *"The Bhagvat Gita"* which says *"Aham Bhramand"* or I myself represent (and determine) my individual personal universe.

Points to Ponder

(1) Universal Signals

Presence of 'Universal signals' is an *unavoidable necessity* of universe which has been hypothesized for the first time in this treo model. The continuity of universe is maintained by these 'universal signals' which carries information at more then the speed of light (S bound treo distance per second is the speed of light). By these signals whole universe will be informed instantly about every event happening at any point any where in universe. Universe has potentials to move these 'universal signals' up to S^2 bound treos distance per second; or instantly any where in universe.

The speed of propulsion of photon (light) at S bound treos per second is restricted due to limit of S^2 ground energy of undeformed space-matrix.

In deformed space-matrix this barrier of the speed of light (maximum speed of propulsion of photon) will be broken for universal signals propagated by cosmic strings [8] of millions / billions of km in length (not by EM radiations), which form in the fabric of omnipresent uniform space-matrix. To transmit the information possibly via cosmic strings the increased kinetic energy of S^3 to S^4 kinetons will be available by the third and fourth dimensional deformation of space-matrix

With this knowledge that one unit space is a cube of 3×10^5 Kms ('one unit space-matrix)' which can contract in an 'electron black hole' (of the size of an electron) and by taking 'one unit space-matrix' as one point, the signal can jump (300,000 Kms or 3×10^5 Kms each time) by each 'vibration of universe' (in Planck's least time) at more then the speed of light.

As graviton (one unit gravitational center) has no rest mass but infinite range of action, each graviton will transmit information of 'load' of each 'one unit mass-energy' on space-matrix and can act as potential antennas of these universal signals. One graviton supports 'load' of S^2 free treos and neutralizes it by two dimensional deformation, which involve S layers or S^2 kinetons. in one full kinetic/ unit gravitational coloumn in undeformed space-matrix each graviton (a mass less boson but with infinite range of action) should register its presence in S^2 bound treo radius.

The S^4 ‘kinetic field energy’ is produced by deformation of ‘multiple unit space matrices’ in one ‘gravitational sphere of unit black hole’ at its gravitational center. This S^4 ‘kinetic field energy’ in the gravitational sphere (inside this unit black hole) can push any universal signal by ($\sqrt{S^4}$) or S^2 bound treos distance per second; or instantly any where in the present size of universe.

These universal signals of unit black holes and of other bodies propelled on cosmic strings are required so that universe can simultaneously act as one unit.

(A) For instant collapse of the whole space-matrix of universe simultaneously after ‘big crunch’ (death of universe) and to create a ‘new big bang’.

(B) For simultaneous expansion of universe, by simultaneous uncurling of all voids after each vibration of universe, which occur simultaneously in whole universe.

(C) To provide uniform ‘tensile strength of space-matrix’ (by constant uniform expansion of universe which produces a ‘cosmological constant’ which act uniformly in whole universe)

(D) To support all matter and to uniformly distribute (as one quanta free treos are distributed on S bound treos in wavelength of unit photon) similarly all galaxies uniformly spread on whole space-matrix of universe, etc.

(2) Possibility of Inter Galactic journeys - Relativity of Space

Imagine you are moving on an escalator or a conveyer belt, you can always move at its basic speed by standing still. But if you want to move faster (more than this base speed), you have to walk or jump forward on this moving escalator or conveyer belt in the same direction.

Our Space-matrix has three inter dependent segments i.e. Space-Time and Energy. If any one component of this trio changes its values the other two components also changes instantly. We have studied so far that by successive contraction of three dimensions of space the fourth dimension of time slows down in locally deformed space and kinetic energy increases. Thus time moves relatively in different frames of contraction of Space. So why the contraction of space (shortening of distance) can not be produced by increasing the kinetic energy segment of space-matrix?

The speed of propulsion of photon (light) by space-matrix is 'S bound treos distance per second', due to S^2 ground energy of space-matrix. Our space ships will not move by contraction of Space-matrix only in first dimension (of length) as produced by photons. Our moving space crafts will produce, one shifting three dimensional deformation of space-matrix. Our Space ships (and all moving cosmic bodies) can surpass this barrier of speed of light in undeformed space (between spiral arms of our galaxy and in inter-galactic space) by contraction of the fabric of space-matrix in the direction of motion by continuous forming of increased kinetic energy generated by their increased momentum.

We live in already deformed space produced by our planet Earth and by our star Sun (which in turn is influenced by gravity of galaxy and revolve around galactic center). In between the spiral arms of galaxy, the undeformed space-matrix and the inter galactic space, will be the possible express high ways for our future space crafts to perform our intergalactic journeys. On these highways our space ships by their own vast momentum will deform / contract, undeformed space-matrix present in these corridors along the direction of their motion and by this on going deformation (contraction) of space-matrix it will reduce the distance of our destination galaxy by many folds. [as volume of one unit space-matrix (a cube of 300,000 km), in principle can contract as 'one electron black hole' of the size of an electron, by momentum of S^3 kinetic energy generated by our space ship (which can even be generated by mass of $\sqrt{S}$ unit masses)]. The flow of time will also slow down (by reduction in total number of vibrations per second in locally deformed space-time) and it will also slow our aging process during our inter galactic journeys.

The inherent S^3 'potential energy' of one 'unit space-matrix', can generate S^3 kinetic energy in deformed space by its contraction up to third dimension and with this kinetic energy our space crafts will achieve a speed of $\sqrt{S^3}$ bound treo per second and we will move at more than the speed of light. It will be an achievable speed for our space crafts, (which will move rotating to produce artificial gravity in side our space ships, to save our bodies from disintegration by undeformed space) moving in undeformed space.

This principle when applied to propel our intergalactic space ship (in our own space ships made up of 'plastic polymers'), will help us to perform these journeys at more than the speed of light [9] by deforming 'undeformed space' and contracting it continuously (contraction of path along its length upto its destination), by converting all 'unit space matrices' into 'electron black holes' in our direction of motion by its own momentum (this momentum once achieved will be conserved by law of conservation of momentum). It will be initially achieved by 'jet propulsion power of energetic polarized neutron beams', ejected by our 'atomic fuel'.

---

1. Discovered in the year 1811 (two hundred five years back) by Mr Lorenzo Romano Amadeo Carlo Avogadro, Count of Quarequa and Cerreto.

2. At this point we can remember that one unit mass is the maximum limit of 'load' which can be supported at 'one bound treo' (graviton) in one least length. To support another 'unit mass' another bound treo and one more space of Planck's least length was required even in in early universe.

3. The strings are named as treos in this treo model. All treos are of Planck's least length and

represent themselves only in one dimension of length. They constitute all five positive dimension of universe. By vibrating in all planes they produce three dimension of space (length, depth and breadth). As they vibrate by S vibrations in one second (at Planck's frequency or Cosmic rhythm) and after each vibration in time gap of Planck's least time, the entire universe readjusts itself and thus it produces a continuous change, which we perceive as 'Flow of Time'. Thus the 'number of vibrations per second' represent the fourth dimension of time. These bound treos in undeformed space-matrix are vibrating in S planes per second and thus they form 'potential energy of space-matrix'. By curtailing the 'Planes of vibrations' from S planes (one by one) they direct the force of their vibrations towards the 'load' (produced by mass or momentum of a body) and generate 'kinetic energy'. Energy is proposed fifth dimension of universe.

4. This nature space-matrix to avoid complex deformations is also exhibited by evenly spreading all the 'free treos in packets' (Photon, Electron or Neutron packets) on space-matrix on its entire wavelength, or by supporting 'central mass pressure' of different bodies by spreading its load on space-matrix in periphery as 'diluted mass pressure of body'.

5. This means that these Neutron packets of body, with their increased 'mass-energy' and increased load on space-matrix, will produce (by an 'equal and opposite reaction') bigger kinetic coloumns of increased layers & will now propel the body to 'increased 'v' bound treos distance per second, by increased 'v' number of layers and (increased) v^2 number of kinetons.

6. Due to increased (mass) with increased momentum of packet, all Electron and Neutron packets of the Einstein train which is moving fast at relativistic speed, will contract in length due to their reduced wavelength.

7. Gravitational forces of next universe in next bran are capable to pierce the bran of our universe and can affect us. San it explain the mysteries of 'Bermudas triangle' 'the missing ship and squadron of fighter planes on its search all disappeared without any trace; were they actually sucked by gravitational deformation of one passing black hole of next universe in next bran' ?

8. The string theory advocates these 'cosmic strings' of millions / billions of km long.

9. 'Tachyon' is hypothetical particle described in literature which moves at 'more than the speed of light'

APPENDIX 1 : REFERENCE VALUES AND CALCULATIONS

Planck's length $l_p = \sqrt{(\hbar G/c^3)} = 1.615788303 \times 10^{-35}\ m$

Planck's mass $m_p = \sqrt{(\hbar c/G)} = 2.17651 \times 10^{-8}\ kg$

Planck's time $t_p = \sqrt{(\hbar G/c^5\ )} = 0.53896896 \times 10^{-43}\ s$

Planck's energy $E_p = \sqrt{(\hbar c^5/G)} = 1.956 \times 10^9\ J$

Planck's angular frequency $\omega_p = \sqrt{(c^5/\ \hbar G)} = 1.855394405 \times 10^{43}$

Planck's force $E_p/l_p = \sqrt{(c^4/G)} = 1.21027 \times 10^{44}\ N$

Planck's energy density $U_p = E_p/l_p{}^3 = c^7/\hbar G^2 = 4.636 \times 10^{113}\ J/m^3$

Planck's temperature $E_p\ /\ kB = 1.417 \times 10^{32}$ °K

Number of bound treos in one meter

1 / Planck's least length i.e. number or bound treos per meter

One / $1.615788303 \times 10^{-35}$ meter =

$0.618892956 \times 10^{35}$ bound treos per meter

Number of bound treos in femto meter (10^{-15} meter)

$0.618892956 \times 10^{20}$ bound treos per femto meter

Number of bound treos in centimeter

$0.618892956 \times 10^{33}$ bound treos per centimeter

Number of bound treos in one Km

$0.618892956 \times 10^{38}$ bound treos per Km

Number of bound treos in one light year

$60 \times 60 \times 24 \times 364.25 \times 1.855394405 \times 10^{43} = 5.8379 \times 10^{51}$ bound treo distance per year

Number of bound treos in one mega parsec

One parsec is 3.26 light year

$3.26 \times 5.8379 \times 10^{51} = 19.031 \times 10^{51}$ bound treo distance is one parsec

$= 19.031 \times 10^{57}$ bound treo distance is one mega parse

Number of bound treos in Radius of slowly expanding Present Size of Universe

10^{62} bound treo distance radius = 13.7 billion light years

Number of bound treos radius which will be the size of one fully expanded future universe before big crunch

S^2 or 10^{86} bound treo distance radius

Total life Span of Universe

$3.441937353 \times 10^{86}$ vibrations or $1.855394405 \times 10^{43}$ seconds or S seconds

Number of vibrations in one second (cosmic rhythm)

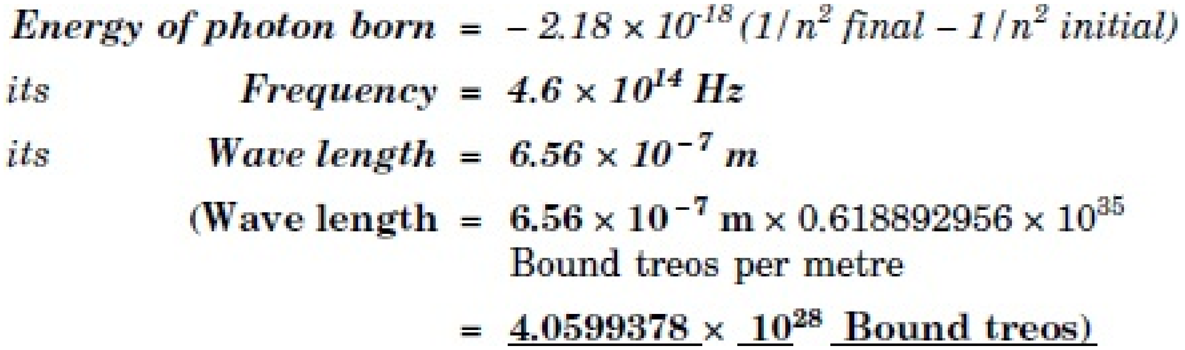
One second / Planck's least time = $1 / 0.53896896 \times 10^{-43}$sec.

= $1.855394405 \times 10^{43}$ vibrations per second (Planck's frequency)

Birth of Photon

Each atom constantly absorbs energy and releases photon at its unique frequency; by jumping of an electron from higher to lower energy shell.

by one (or more) quantum level (s).



Energy of photon born = $-2.18 \times 10^{-18} (1/n^2 \text{ final} - 1/n^2 \text{ initial})$

its *Frequency* = 4.6×10^{14} *Hz*

its *Wave length* = 6.56×10^{-7} *m*

(Wave length = 6.56×10^{-7} m $\times 0.618892956 \times 10^{35}$
Bound treos per metre

= $\underline{4.0599378} \times \underline{10^{28}}$ Bound treos)

Speed of Light

Number of Vibrations in one Second

One second / Planck's least time = $1 / 0.53896896 \times 10^{-43}$

= $1.855394405 \times 10^{43}$ vibrations per second (S vibrations)

in Planck's least time by one vibration the photon packet is pushed from one bound treo to next bound treo on space-matrix.

then speed of photon = $1.855394405 \times 10^{43}$ i.e. S bound treo distance per second

Speed of Displacement of Photon Per Second

$1.855394405 \times 10^{43}$ vibrations per second × $1.615788303 \times 10^{-35}$ meter displacement per vibration = $2.997924577 \times 10^{8}$ meter per second, is conventional value of c; the Speed of light.

*($1.615788303 \times 10^{-35}$ meter (one Planck's distance) is occupied by one bound treo.)

Reduced Planck's Constant and Planck's Constant.

{This calculation was first time published in my first book "INSIDE A WAVE", Manas Prakashan, 2005}

Reduced Planck's constant (ħ) is the value of, one quantum energy

(1) Number of Treos in one Quanta Energy

= $1.855394405 \times 10^{43}$ treos (S number of free treos)

(2) Mass of Treos in one Quanta Energy

$1.855394405 \times 10^{43}$ free treos in one quanta / $1.581858906 \times 10^{94}$ number of treos in one kg

= $1.172920289 \times 10^{-51}$ kg

(3) Energy of one quanta mass ($E = mc^2$)

$1.172920289 \times 10^{-51}$ kg × ($2.997924577 \times 10^{8}$ meter per second)^2

= 10.54168182 Joule-Sec

(4) Planck's Constant (h) is the Angular Momentum of one Quantum

Energy

10.54168182 Joule-Sec × 6.285714286 (value of 2π)

$= 6.6262 \times 10^{-34}$ Joule-Sec

(Exact conventional value of Planck's constant)

Gamma Photon and Pair Production

2.8724104×10^{64} free treos are present in 1.02 MeV energetic gamma photon of $1.54814006 \times 10^{21}$ frequency. It will divide in two equal parts of electron and positron pair, each having half ($1.439491604 \times 10^{64}$) free treos.

(A) Mass-energy of Gamma Photon of 1.02 MeV

$1.855394405 \times 10^{43}$ free treos per quantum × $1.54814006 \times 10^{21}$ frequency of wave = 2.8724104×10^{64} free treos.

Or

$0.181584489 \times 10^{-29}$ kg calculated mass-energy in gamma photon × $1.581858906 \times 10^{94}$ free treos per kg = 2.8724104×10^{64} free treos.

(B) Energy of Gamma Photon of 1.02 MeV

$0.181584489 - 10^{-29}$ kg × ($2.997924577 \times 10^{8}$ meter per second)^2 = 1.632 10^{-13} Joule-Sec ($E = mc^2$)

or

1.02 MeV × 1.6×10^{-19} J per electron = 1.632 10^{-13} Joule- Sec

(C) Mass-energy of Unit Electron of 0.51MeV

$1.581858906 \times 10^{94}$ free treo per kg × 9.1×10^{-31} kg = $1.439491604 \times 10^{64}$ free treos

(D) Energy of Unit Electron of 0.51 MeV

0.51 MeV × 1.6×10^{-19} J per electron = 0.816×10^{-13} joule

Compton Wave Length of (0.51 MeV) Electron

(2 π r is circumference of circle or Compton wavelength, while radius r is Reduced Compton wavelength of electron)

$2.4263102389(16) \times 10^{-12}$ m Compton wavelength of Electron = 1.5016263×10^{23} bound treo distance

Reduced Compton Wave Length of (0.51MeV) Electron (R_q quantum radius)

(Compton wavelength/2π)

(2.4263102389(16) × 10-^{12} m / 2π ≈ $0.38600391 \times 10^{-12}$ M) =23.88951×10^{21}Bound treo distance

(1) Reduced Compton wavelength of Electron × 137 (1/ fine structure constant)

= 5.29×10^{4} fm = $32.7225276 \times 10^{23}$ Bound treo distance is Bhor radius of Electron (0.51MeV)

(2) Reduced Compton wavelength of electron × 1 / 137 (Fine structure constant)

= *2.82 fm* = 1.7437599×10^{20} Bound treo distance is Classical radius of

Electron (0.51MeV)

Classical Electron Radius

2.82 fm = 1.7437599 × 10^{20} bound treo distance (0.618892956 × 10^{35} x 2.82 × 10^{-15})

Bohr’s Radius

5.29 × 10^{4} fm = 32.7225276 × 10^{23} bound treo distance

Electron Charge

1.6022 × 10^{-19} Coulomb (elementary charge or charge on one Electron)

Characteristics of an energetic Electron

3.8616 × 10^{13} m	R_q *quantum radius*
7.7634 × 10^{20} s–1	σ_c *Compton angular frequency*
1.2356 × 10^{20} Hz	σ_c *Compton frequency*
8.1871 × 10^{14} J	E_i *internal energy*
9.1094 × 10^{31} kg	*me electrons mass*
1.6022 × 10^{19} Coulomb	*e elementary charge*
6.7635 × 10^{58} (E_i/R_q)	R_s *classical Schwarzschild radius*

Mass-energy of Proton

1.672313038 × 10^{-27} kg × 1.5808523 × 10^{94} Free Treos per kg

= 2.6417043 73 × 10^{67}free treos

Proton = 2.641704371 × 10^{67} free treos

Mass-energy of Neutron

1.67 × 10^{-27} kg × 1.5808523 × 10^{94} free treos per kg

= 2.645363273 × 10^{67}free treos

Neutron = 2.645363273 × 10^{67}free treos

Mass-energy of W Boson

14.24192075 × *10^{-26} kg* × 1.5808523 × 10^{94} free treos per kg

= 22.52870912 × 10^{68} free treos

22.52870912 × 10^{68} free treos or 80 GeV

Mass-energy of Z Boson

16.02216084 × *10^{-26} kg* × 1.5808523 × 10^{94} free treos per kg

= 25.34479782 × 10^{68} free treos

25.34479782 × 10^{68} free treos or 90 GeV

Mass-energy of Unit Mass (Planck's Mass)

One unit mass is = 2.17651 10^{-8} kg × 1.5808523 × 10^{94} free treos per kg
= 3.442488398 × 10^{86} free treos, i.e. S^2 free treos.

Mass-energy of Carbon Atom

$2.641704373 \times 10^{67} \times 12$ nucleons = 31.700×10^{67} free treos

Mass of one kg Carbon

5.0188×10^{25} number of carbon atom in one kg $\times 31.700 \times 10^{67}$

$= 1.5808523 \times 10^{94}$ free treos

Mass-energy in one kg weight

One kg mass = $1.\ 5808523 \times 10^{94}$ free treos

Mass-energy in Unit Black Hole

S^3 free treos or S unit masses

$= (1.855394405 \times 10^{43})^3$

$= 6.3871737 \times 10^{129}$ free treos

Distance Of Planetary Orbit of Earth from Sun (semi major axis of Earth)

$0.9258638622 \times 10^{46}$ bound treo distance from Sun

Speed of Revolution of Earth

29.7934848 km per second = $1.84389778 \times 10^{39}$ bound treo distance per sec

Size of Planetary Orbit of Earth

Circumference of orbit = $2r \times \pi = n\lambda$

$[\ 2 \times 0.9258638622 \times 10^{46} - 1$ bound treos $\times\ \pi\ ]$

= 5.8197156×10^{46} bound treos joins to form orbit of planet Earth

Orbital speed of Earth

$1.84389778 \times 10^{39}$ bound treo distance per second × 31557600 seconds in one year = 5.8188989×10^{46} bound treo distance in one year.

Avogadro Number

Each single atom or one ion have its own incomplete one full kinetic / unit gravitational coloumn.

Avogadro number = 2.066×10^{23}

Avogadro number of unit electron charges = one Faraday charge

Avogadro number of hydrogen atoms = one mole of Hydrogen

Avogadro number of carbon atoms = one mole of Carbon

Avogadro number of any gas molecules = one mole of gas (which occupies 22.4 liter at STP)

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APPENDIX 2 : OBSERVATIONS OF ANCIENT INDIANS

This section discusses interesting trivia from Indian ancient literature on topics such as Gravitation, Speed of Light and Helio-centricity.

There is a lot of evidence that ancient Indian civilization was using extremely accurate astronomical, heliocentric calculations, for both Earth and celestial motions, indicating an understanding that the Sun is at the center of the solar system and that the Earth is round.

As per the Vedas and ancient texts, it appears that ancient Indians have calculated accurately the motion of planets, sunset, sunrise, eclipses, etc. presumably without using telescopes or any other machinery. Elliptical orbits were also calculated for all moving celestial bodies. What Indians calculated thousands of years ago, for example the ***wobble of the Earth's axis****, which creates the movement called* ***'precession of the equinoxes'*** *– the slowly changing motion that completes one cycle every 25,920 years – has only recently been validated by modern science.*

When we talk of ***gravity,*** *Newton comes to our mind, but in the text* ***Surya Sidhantha*** *dated around 400 AD,* ***Bhaskaracharya*** *described "objects fall on the Earth due to one force. The Earth, planets, constellations, moon and Sun are held in orbit because of that one force".*

Forty-four centuries before Isaac Newton, the ancient Hindu text ***Rig Veda written in 1750 BC asserted that a force (which we now call gravitation) held the universe together.***

Bhaskara I (629 AD): "Yavantamakasapradesam ravermayukhah samantat dyotayanti tavan pradesah khagolasya paridhih khakaksya anyatha hyaparimitatvat akasasya parimanakhya namnopapadyate". *It can be roughly translated as - That much of the sky as the Sun's rays illuminate on all sides is called the orbit of the sky. Otherwise, the sky is beyond limit; it is impossible to state its measure.*

This implies that while the universe is infinite, but the solar system extends as far as the rays of the Sun can reach.(This can be the 'acceleration zone of the Sun according to present model' or the limit up to which the 'diluted mass pressure of Sun' and it's reacting 'gravitational (field) coloumn of Sun' finally extends, causing the deformation in first dimension.)

Spherical Earth - *The Sanskrit speaking Aryans subscribed to the idea of a spherical Earth in an era when the Greeks believed in a flat one. The existence of rather advanced concepts, like the spherical Earth and the cause of seasons were quite clear in Vedic literature.*

Aitareya Brahmana *(verse 3.44) declares: "The Sun does never set nor rise. When people think the Sun is setting (it is not so). For after having arrived at the end of the day it makes itself produce two opposite effects, making night to what is below and day to what is on the other side. Having reached the end of the night, it makes itself produce two opposite effects, making day to what is below and night to what is on the other side. In fact, the Sun never sets."*

(A) Seven colors compromising light: "Seven horses draw the chariot of Surya". Rig Veda 5. 45.9: *These seven horses are the seven colors comprising light. These seven colors become visible in a rainbow or when light passes through a prism.*

(B) The speed of light was calculated by Maxwell in the 19th century, but it was previously determined quite accurately thousands of years before as mentioned in the Rig Veda. It was further elaborated by Sayana in the 14th century AD in his commentaries on Rig Veda. *(The*

Rig Veda is the oldest Indian text and one of the oldest surviving in the world.)

Sayana (c.1315–1387) a vedic scholar and prime minister in the court of Bukka I (and his successors) of Vijaynagar empire in Karnataka of south India in his commentary says,

Fourth verse of the hymn 1.50 of Rigveda: 'Tatha ca smaryate yojananam. Sahasre dve dve sate dve ca yojane ekena nimisardhena kramaman'.

It means "it is remembered here that Sun (light) traverses 2,202 yojanas in half a nimisha" {Same statement occurs in the commentary of Bhatta Bhaskara (10th century) where it is said as old Puranic tradition.}

The ***'yojana'*** *is an ancient unit of length. 'Arthshastra' defines it as equal to 8,000 dhanus, which is equivalent of 9.09 miles.*

A ***'nimisha'*** *is an ancient unit of Time, that is equal to 16 / 75 Sec.*

Thus '2,202 yojana in half a nimisha' is equal to 189,547 miles per second (accepted speed of light today is 186,281.7 miles per second).

CALCULATIONS

In 'Moksha Dharma Parva' of Shanti Parva in 'Epic Mahabharata'
Nimisha(time taken for blink of eye)

15 Nimisha = 1 Kastha
30 Kastha = 1 Kala
30.3 Kala = 1 Muhurta
30 Muhurta = 1 Diva-Ratri (i.e. 24 hours)
15 × 30 × 30.3 × 30 = 409050 Nimisha in 24 hours
While 60 × 60 × 24 = 86,400 Seconds in 24 hours

Thus 409050 Nimisha	*= 86,400 seconds*

Or one Nimisha is 0.2112 seconds and ***half Nimisha is 0.1056 seconds.***

The 'Vishnu Purana' book 1 chapter 6 defines 'Yojana', a Vedic unit of distance

10 Paramanus	*= 1 Para-súkshma*
10 Para-súkshmas	*= 1 Trasarenu*
10 Trasarenus	*= 1 Mahírajas (particle of dust)*
10 Mahírajas	*= 1 Bálá-gra (hair's point)*
10 Bálá-gra	*= 1 Likhsha*
10 Likhsha	*= 1 Yuka*
10 Yukas	*= 1 Yavodara (heart of barley)*
10 Yavodaras	*= 1 Yava (barley grain of middle size)*
10 Yava	*= 1 Angula (1.89 cm or approx 3/4 inch)*
6 Angula	*= 1 Pada (the breadth of foot)*
2 Padas	*= 1 Vitasti (span of fingers)*
2 Vitasti	*= 1 Hasta (cubit)*
4 Hastas	*= a Dhanu, a Danda, or Paurusa (a man's height)*
or 2 Nárikás	*= 6 feet*
2,000 Dhanus	*= 1 Gavyuti (distance to which a cow's lowing can be heard) = 12,000 feet*

4 Gavyutis = 1 Yojana = 9.09 miles

Thus speed of light

= 2,202 × 9.09 miles per 0.1056 seconds

= 20,016.18 miles per 0.1056 seconds

= 189, 547 miles per second

The ***Indians of the fifth century A.D. calculated the age of the Earth as 4.3 billion years****. This culture gave us* ***zero,*** *the numerals that we use. So called Arabic have their roots in India – as do* ***trigonometry and calculus, astronomical calculation*** *and a view that says the universe is not only billions, but trillions of years in age and that we are the eternal beings who are simply visiting the material world to have the experience of being here.*

□□

This is the story of omnipresent and uniform space matrix, a higher dimensional continuum of space-time-energy which acts 'to produce equal and opposite reaction' and 'propels all mass indefinitely'.

This book introduces the hypothesis of five dimensional primordial particles named as 'treos'. The five dimensions arise from three physical dimensions, along with one dimension of time and one proposed dimension of energy. The treos in bound form create the space matrix and in their free form the treos create all matter, as explained inside.

The four fundamental forces are described as 'load dependent deformation of space-time in increasing number of dimensions'.

This book attempts to bring the third fundamental change in our understanding of phenomenon of gravitation after Newton and Einstein, taking it to the quantum level while still keeping it simple.

We will examine the world around us in a different perspective and answer many perplexing questions to change our picture of universe forever.